Appendix A: Checklist

In order to meet the minimum submission requirements of this Request for Proposal, proposals must include the following:

Cover Letter
Section 1: Applicant Information
Section 2: Statement of Qualifications
Section 3: Reuse Concept
Section 4: Rehabilitation Plan
Section 5: Lease Term
Section 6: Financing Plan
Part 7: Income Sources
Section 8: Miscellaneous Financial Information
Section 9: Organizational Structure (if applicable)
Section 10: Statement of Tax Compliance
Section 11: Disclosure Statement Concerning Beneficial Interest
Section 12: Conflict of Interest
Section 13: Anti-Discrimination

Appendix B: Definitions

For the purpose of this Request for Proposal, the following terms shall have the following meanings unless the context otherwise specifically indicates. In some instances, preservation terms have been defined according to the Secretary of the Interior's Standards for the treatment of Historic Properties. Those terms are identified with the notation (SI).

- 1. Accessibility: In 1990, Congress passed the Americans with Disabilities Act (ADA), which expanded accessibility requirements beyond federal government buildings to state and local government buildings as well as the private sector. The ADA recognizes and protects the civil rights of people with disabilities and is modeled after earlier landmark laws prohibiting discrimination on the basis of race and gender. The ADA requires that buildings and facilities be accessible to and usable by people with disabilities. DCR, through its Universal Access Program and other initiatives, is committed to providing accessible facilities for all visitors.
- 2. Adaptive Reuse use of the property in such a way that it retains and reinforces historic character and architectural integrity while accommodating contemporary use. (SI)
- 3. Building Conditions Appraisals Reports produced by DCR documenting the conditions of a property's structural systems, plumbing, heating and electrical systems, exterior and interior finishes, building code, accessibility and historic preservation priorities
- 4. DCAM the Division of Capital Asset Management, Commonwealth of Massachusetts, One Ashburton Place, 15th Floor, Boston, MA 02108
- 5. DCR the Department of Conservation and Recreation of the Commonwealth of Massachusetts, Division of Planning and Resource Management, Office of Cultural Resources, 251 Causeway Street, 7th Floor, Boston, MA 02114
- 6. General Laws the General Laws of the Commonwealth as amended including any rules, regulations and administrative procedures implementing said laws.
- 7. Historic Fabric material remains of a historic building, structure or landscape; either original materials or materials incorporated in a subsequent historically significant period as opposed to materials utilized to maintain or restore the structure during a non-historic period. (SI)
- 8. Historic Integrity the authenticity of a property's historic identity, evidenced by the survival of physical characteristics that existed during the property's historic period. (SI)
- 9. Historic Property any site, building, or structure included which has been deemed by the Department of Conservation and Recreation to be significant to the history of the Massachusetts state forest and park system or which is

included or has been determined by the Massachusetts Historical Commission to be eligible for inclusion on the National Register of Historic Places.

- 10. Improvements work necessary for the rehabilitation of the property as set forth in the Building Conditions Surveyor an alternative rehabilitation plan proposed by the Curator and approved by DCR.
- 11. Lease a written contract by which rights of use and possession in land, structures and/or buildings is given to another person for a specified period of time for rent and/or other consideration.
- 12. Management Services also "public benefit;" work not considered improvements or maintenance services which is over and above the passive occupation of the property by a Curators (i.e. educational programming, trail maintenance).
- 13. National Register of Historic Places The National Register of Historic Places is the Nation's official list of cultural resources worthy of preservation. Authorized under the National Historic Preservation Act of 1966, the National Register is part of a national program to coordinate and support public and private efforts to identify, evaluate, and protect our historic and archeological resources. Properties listed in the Register include districts, sites, buildings, structures, and objects that are significant in American history, architecture, archeology, engineering, and culture. The National Register is administered by the National Park Service, which is part of the U.S. Department of the Interior. Listing in the National Register contributes to preserving historic properties in a number of ways:
- Recognition that a property is of significance to the Nation, the State, or the community.
- Consideration in the planning for Federal or federally assisted projects.
- Eligibility for Federal tax benefits.
- Qualification for Federal assistance for historic preservation, when funds are available.
- 14. Preservation the act or process of applying measures to sustain the existing form, integrity, and material of a structure or landscape. [This includes initial stabilization work where necessary, as well as on-going maintenance.] (SI)
- 15. Preservation Maintenance the act or process of applying preservation treatment to a site or structure. This includes housekeeping and routine and cyclic work scheduled to mitigate wear and deterioration without altering the appearance of the resource, repair or replacement in-kind of broken, or deteriorated elements, parts or surfaces so as to keep the existing appearance and function of the site or structure, and emergency stabilization work necessary to protect damaged historic fabric from additional damage. (SI)
- 16. Project Manager the individual assigned by the Commissioner to be responsible for coordinating and managing all activities of the Department under the Historic Curatorship Program.

- 17. Provisional Lessee Designation agreement in which a proposer is designated as the selected Curator. Terms and conditions are outlined which must be satisfied prior to the execution of a lease between the Commonwealth and the Curator.
- 18. Public Benefit see management services.
- 19. Reconstruction the act or process of accurately reproducing a site or structure, in whole or in part, as it appeared at a particular period of time. (SI)
- 20. Rehabilitation the act or process of returning the property to a state of utility through repair or alteration that makes possible an efficient contemporary use while preserving those portions or features of a property that are significant to its historical, architectural, and cultural values. (SI)
- 21. Restoration the act or process of recovering the general historic appearance of a site or the form and details of a structure, or portion' thereof, by the removal of incompatible natural or human caused accretions and the replacement of missing elements as appropriate. For structures, restoration may be for exteriors and interiors, and may be partial or complete. (SI)
- 22. Special Use Permit revocable agreement between DCR and the designated Curator which allows the rights of use and access to the property between the time the Curator is provisionally designated and the execution of the lease for a period up to three years.
- 23. Sustainable Design Sustainable design seeks to reduce negative impacts on the environment, and the health and comfort of building occupants, thereby improving building performance. The basic objectives of sustainability are to reduce consumption of non-renewable resources, minimize waste, and create healthy, productive environments. Sustainable design principles include the ability to: optimize site potential; minimize non-renewable energy consumption; use environmentally preferable products; protect and conserve water; enhance indoor environmental quality; and optimize operational and maintenance practices. (Definition from General Services Administration)

Appendix C: Preservation Standards and Criteria

DCR requires that the exterior of the property be preserved in its existing architectural style. Interior space may be adaptively used, but remaining original detail is to be retained to the greatest extent possible. Preservation work and maintenance will be done by the Curator with plans, specifications and the work itself reviewed and approved by DCR, in consultation with MHC.

1. Historic Standards

The following general standards, as well as the Secretary of the Interior's Standards for the Treatment of Historic Properties (1992) should govern the specific approach to preservation and use of the exterior and interior of the property:

- a. Every reasonable attempt shall be made to provide for compatible uses that require minimal alterations.
- b. The proposed uses of the property must maximize both immediate and long range preservation of the structure and its environment.
- c. The distinguishing qualities and character of the property shall not be destroyed. Distinctive architectural and/or significant site features are not to be altered, and any historic material identified in the course of renovations is not to be removed from the building without the express approval of DCR.
- d. All treatment that may affect surface or subsurface disturbances within the lease area must be evaluated by an archaeologist for potential effects to archaeological resources. If it is determined that an archaeological survey is necessary it should be conducted under permit from the state archaeologist at the Massachusetts Historical Commission in accordance with 950 CMR 70. Should artifacts be discovered in the course of the project, they should be investigated and recorded by an archaeologist permitted by the state archaeologist, and turned over to the appropriate curatorial facility in accordance with Massachusetts General Laws, Chapter 9 Sec. 27c.
- e. With regard to the interior of the property, DCR's preference is for historical fabric to be preserved. However, DCR is prepared to cooperate with a successful Proposer in developing an adaptive reuse program which insures the economic viability of the project while satisfying the Department's objective of preserving the property.
- f. Every attempt shall be made to maintain and care for the cultural and natural environment. Any earthmoving and excavation shall be reviewed by DCR.

2. Construction Standards

DCR requires that all improvements to the property comply with the following codes and standards:

- a. Massachusetts State Building Code Edition 5;
- b. State Plumbing Code;
- c. DEP Title V;
- d. Chapter 131;
- e. all other applicable local codes

All work shall be reviewed and by DCR's Bureau of Engineering. All work to the building and plumbing system is subject to review and approval by the State Building Inspector. Electrical work is subject to the review and approval of the local electrical inspector.

Secretary of the Interior's Standards for the Treatment of Historic Properties

- 1. A property shall be used for its historic purpose or be placed in a new use that requires minimal change to the defining characteristics of the building and its site and environment.
- 2. The historic character of a property shall be retained and preserved. The removal of historic materials or alteration of features and spaces that characterize a property shall be avoided.
- 3. Each property shall be recognized as a physical record of its time, place, and use. Changes that create a false sense of historical development, such as adding conjectural features or architectural elements from other buildings, shall not be undertaken.
- 4. Most properties change over time; those changes that have acquired historic significance in their own right shall be retained and preserved.
- 5. Distinctive features, finishes, and construction techniques or examples of craftsmanship that characterize a property shall be preserved.
- 6. Deteriorated historic features shall be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature shall match the old in design, color, texture, and other visual qualities and, where possible, materials. Replacement of missing features shall be substantiated by documentary, physical, or pictorial evidence.
- 7. Chemical or physical treatments, such as sandblasting, that cause damage to historic materials shall not be used. The surface cleaning of structures, if appropriate, shall be undertaken using the gentlest means possible.
- 8. Significant archeological resources affected by a project shall be protected and preserved. If such resources must be disturbed, mitigation measures shall be undertaken.

- 9. New additions, exterior alterations, or related new construction shall not destroy historic materials that characterize the property. The new work shall be differentiated from the old and shall be compatible with the massing, size, scale, and architectural features to protect the historic integrity of the property and its environment.
- 10. New additions and adjacent or related new construction shall be undertaken in such a manner that if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.

Appendix D: Historic Curatorship Program Enabling Legislation

Section 44, Chapter 85, Acts of 1994

SECTION 44. Notwithstanding the provisions of any general or special law to the contrary, the department of environmental management may, consistent with established procedures of the division of capital planning and operations, and as provided herein, lease real property under its control and supervision to any person or organization, if the commissioner of said department makes a determination that such lease will adequately ensure the preservation and maintenance of an historic property, and that such lease is otherwise consistent with the department's duties and responsibilities.

For the purposes of this section the following words shall have the following meanings:-

"Historic property", any real property possessing historic value, and so identified hereunder in this section.

Any lease entered into by the department pursuant to this section shall provide, at a minimum, for the following: (a) the improvement and maintenance and management, throughout the term of the lease, of the property by the lessee in conformance with appropriate standards for rehabilitation of historic properties approved by the Massachusetts historical commission, and all other applicable provisions of law; (b) the payment to the department of fair market rent for the property, provided that the value of any improvements and maintenance and management services provided by the lessee under the lease may be deducted from the amount payable over the term of the lease; (c) a finding by the commissioner that the property covered by the lease, while not needed for use by the department for the duration of the lease, is nonetheless subject to its statutory duty under section one of chapter twenty-one of the General Laws to exercise control and supervision of areas of historic significance committed to it, and that the lease is entered into by the department pursuant to said duty; (d) the opening of the property to the public, no less often than twice each year, for the purpose of providing public access to the historic qualities of the property; and (e) any and all other provisions, terms and conditions as the commissioner may deem necessary and appropriate to protect the interests of the commonwealth and ensure the adequate preservation of the historic or other qualities of the property for future generations.

Historic properties subject to the provisions of this section shall include: the Barton house, so-called, Foxborough state forest, the Bell house, so-called, in Maudslay state park, the farm house, so-called, in Maudslay state park, the superintendent's house, so-called, in Wachusett Mountain state reservation, the Benjamin Osborne house, so-called, in Mount Washington state forest, Palmer mansion, so-called, in Bradley Palmer state park, E. F. Dodge house, so-called, in Bradley Palmer state park, Summit house, so-called, in Skinner state park, Hunter House, so-called, in Windsor state forest, Lowell Litchfield house, so-called, in Carlisle state forest, Graham house, so-called, in Nickerson state park, the former Knights of Columbus camp, so-called, in Dubuque state forest, Hunt house, so-called, in Mount Washington state forest, the gatekeeper's house and shed, so-called, Lowell heritage park, the superintendent's house, so-called, Beartown state forest, the Internann house, so-called, Mount Washington state forest, Crosby mansion, so-called, Nickerson state park, Vierick house, so-called, Nickerson state park, Vie

called, Halibut Point state park, Elder house, so-called, Natural Bridge state park, Windago Camp compound, so-called, Windsor state forest, and Bascom Lodge, so-called, Mount Greylock state reservation.

The commissioner shall establish guidelines for the implementation of a program of curatorship leases, provided, however, that such guidelines shall, at a minimum, provide for an open, competitive process for selecting lessees.

Historic Curatorship Enabling Legislation Amendments

Section 50, Chapter 15, Acts of 1994

SECTION 50. Said section 44 of said chapter 85 is hereby further amended by striking out, in line 35, the words ", E.F. Dodge house" and inserting in place thereof the following words:-, the Coach House and Carriage Garage at Bradley Palmer State Park, the Farm Complex at Maudslay State Park, Gilder House complex at Jug End, the Weeks House at Myles Standish State Forest, the Baker Chocolate Factory Company Administration Building at Lower Mills in the city of Boston, Lamson House and garage.

Section 19 Chapter 236, Acts of 2002

SECTION 19. Section 44 of chapter 85 of the acts of 1994, as amended by section 50 of chapter 15 of the acts of 1996, is hereby further amended by inserting after the word "forest", in line 31, the following words:-, Smith farmhouse, garage and barn in Borderland state park, Woodis house in Acushnet cedar swamp state reservation, Harlow house and barn in Ellisville state park, the farmhouse and barn in Carroll A. Holmes recreational area, formerly known as Lake Wyola state park, and coachman's house and barn in Maudslay state park.

Guidelines for:

The Maintenance of Historic Properties

Including Recommendations for the Long Term Care of Historic Buildings and Landscapes

Commonwealth of Massachusetts
Department of Conservation and Recreation
Office of Cultural Resources



Commonwealth of Massachusetts Deval L. Patrick, *Governor*

Executive Office of Energy & Environmental Affairs Ian A. Bowles, *Secretary*

Department of Conservation & Recreation Richard K. Sullivan, Jr., *Commissioner*

Division of Forest and Parks Priscilla Geigis, *Director*

Office of Cultural Resources Patrice Kish, *Director*

Historic Curatorship Program Kevin Allen, *Manager*

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FOREWORD

The Department of Conservation and Recreation (DCR), through the Office of Cultural Resources, has prepared the following:

STANDARDS FOR THE MAINTENANCE OF HISTORIC PROPERTIES

as a means to aid Curator/Tenants in the development of a long term maintenance plan for Historic Curatorship Program properties.

The purpose of these *Maintenance Standards* is to provide a means of evaluating the performance of the Curator/Tenant as well as to insure a high level of care and protection for these valuable historic resources.

The guidelines contained herein are meant to provide a broad-based philosophy of maintenance, applicable to all historic properties. However, the Department acknowledges that curatorship properties vary in size and

condition, with some properties requiring specialized attention to landscape and architectural details. Therefore, it is DCR's goal to work with each Curator/Tenant in setting annual priorities for individual properties in order to both preserve the character of the property and minimize future expenditures.

The Department intends to work cooperatively with the Curator/Tenant in overseeing the condition of the curatorship property. The result of a well-developed maintenance plan will be the extended life of an historically significant property, lowered costs for the Curator/Tenant and the public benefit of a well-maintained, attractive property. The Department looks forward to working with Curator/Tenants towards the common goal of the preservation of the Commonwealth's historic properties.

PART I - BACKGROUND

A. Department of Conservation and Recreation

The Department of Conservation and Recreation (DCR) is an agency of the Commonwealth of Massachusetts. It is charged with overseeing and implementing a wide variety of statutory mandates relating to conservation and outdoor recreation. These include "control and supervision of such parks, forests and areas of recreational, scenic, or historic significance as may be from time to time committed to it." [Mass.General Laws, Ch. 21, §1]

B. Mission Statement

The mission of the Department of Conservation and Recreation is to exercise care and oversight of the natural, cultural and historic resources of the Commonwealth and to provide quality public recreation opportunities which are environmentally sound, affordable and accessible to all citizens.

To carry out its mission, DCR investigates, analyzes, promotes and demonstrates the wise stewardship of the Commonwealth's natural, cultural and historic resources; develops and maintains public access to such resources in the rural, suburban and urban areas of the Commonwealth; provides public recreation and education programs; and manages, protects and conserves all public lands, waters and facilities that have been entrusted to the care of the Department, for this and future generations.

C. The Massachusetts Forests and Parks System

Beginning in 1898 with the establishment of Mt. Greylock State Reservation, the Commonwealth of Massachusetts has created an extensive system of State Parks and Forests. This system totals over 270,000 acres in over 160 distinct management units. It is under the control and supervision of the Department of Environmental Management (DCR). Day to day management and operation of DCR properties is the responsibility of the Department's Division of Forests and Parks.

D. Historic Curatorship Program

The Historic Curatorship Program, administered by DCR's Office of Cultural Resources, is a leasing program for historic properties located within the Massachusetts Forests and Parks System. The

primary goal of the Historic Curatorship Program is to obtain the rehabilitation and maintenance of historic state park properties in exchange for a long term lease.

PART II - METHODOLOGY

A. Purpose

The purpose of this document is to describe the maintenance requirements of the Historic Curatorship Program and to provide the Curator/Tenant with guidelines for the maintenance of historic properties in the Program.

The following guidelines are general maintenance standards required under a curatorship lease. However, many Historic Curatorship Program properties include historic landscape elements which are character defining features of the property. In such cases, significant elements will be identified by DCR, and specific maintenance treatments will be developed with the Curator/Tenant. Maintenance requirements specific to a property are listed in the lease exhibit entitled "Maintenance Services" for the property.

B. Annual vs. Cyclical Property Maintenance

There are two categories of property maintenance: annual and cyclical. Since climate, weather conditions and other variables can affect the lifespan of materials, both annual and cyclical maintenance are essential to the proper upkeep of a historic building or landscape. Annual and cyclical maintenance can be defined as follows:

Annual maintenance is a regular, repeated action, usually performed every year and serves as a preventative measure. In a building, the cleaning of the roof gutters and downspouts would be examples of annual maintenance. In a landscape, mowing the lawn or raking leaves would be categorized as annual maintenance. A well-developed annual maintenance plan can extend the longevity of building materials, preventing costly future repairs.

Cyclical maintenance is a less frequent schedule of repair and replacement with a varied timetable, depending on the material in question. Installation of a new roof would be considered cyclical, since it occurs every 15 to 20 years. In a landscape, the rejuvenation of a plant bed or the resetting of stone steps is cyclical maintenance. Since cyclical maintenance can be more expensive than annual

maintenance, Curator/Tenants should anticipate cyclical needs and plan accordingly. Appendix -- of these guidelines lists the average lifespans for some common building materials.

C. Goals of Proper Maintenance

1. Benefits to the Curator/Tenant

- **a. Cost savings** Annual and cyclic maintenance of a property can prevent more serious and costly deterioration.
- **b. Visual Character** If a property is regularly maintained it will look well-kept and attractive and inviting.
- c. Energy Efficiency Regular work on securing windows, doors and chimneys as well as placement of insulation insure tighter, more energy efficient buildings. Such efficiency results in annual cost savings for building heat as well as making the building more livable.
- d. Public Safety Regular and cyclical maintenance insures that buildings are kept up to current building codes and less likely to encourage fires, plumbing leaks and structural failures. Built forms within the landscape also need to be attended to in order to avoid structural failures, earth movement or other problems.
- e. Environmental Protection Failed septic systems, well contamination, underground fuel storage tank leaks, over use of pesticides and herbicides and other forms of environmental degradation can be avoided if tested, checked and/or inspected on a regular basis.

2. Benefit to the Commonwealth

- a. Compatibility with Public Open Space Over the years DCR has acquired land for public use and has maintained these properties to a high standard. A comprehensive maintenance plan for a Historic Curatorship property will enhance the appearance of the DCR facility and promote the goals of the facility management plan.
- b. Preservation of Historically Significant Property -Almost all of the Historic Curatorship properties are eligible for nomination to the National Register of Historic Places. Each property building and landscape is a significant physical reminder of the past. With proper maintenance they will be preserved for many generations to come.

c. Public benefit - Historic Curatorship properties will be open to the public at least twice each year, some more frequently. Regular maintenance of the property will add to the public enjoyment of the historic site.

PART III - MAINTENANCE STANDARDS

In order to keep the Historic Curatorship Program properties - both buildings and their settings - in good, operable condition, the following minimum standards shall apply:

A. Building Exteriors

- Buildings shall be kept tight to the weather by installation of watertight roofing, protective
 paint coatings, proper drainage systems and other means by which water is prevented from
 penetrating into the building.
- Foundation plantings shall be pruned in order to prevent excessive moisture against the buildings.

B. Building Interior

- Interiors shall be kept clean and dry.
- To the greatest extent possible, interior plaster and wood finishes shall be protected from insect infestation, condensation and water penetration.

C. Building Structure

- Buildings shall be kept dry, structurally sound and in good repair.
- While under structural repair, buildings shall be stabilized and properly protected to prevent further damage to the building or to persons performing or observing the work in progress.
- All building repairs shall comply with all applicable state and/or local building codes.
- In the event repairs and/or restoration cannot occur immediately, the building shall be stabilized, in accordance with recognized preservation standards, in order to prevent further deterioration.

D. Building Systems

- All building systems (plumbing, heating, air conditioning, electrical, smoke detector, fire suppression, security alarm systems and other building systems) shall be kept operable and in good repair and shall comply with applicable state and/or local building codes.
- The Curator/Tenant shall take every measure to prevent water leaks and resultant damage, electrical shocks or failure, and other similar damage that may result from the failure of a building system.

E. Grounds

- The Curator/Tenant shall keep the grounds around the buildings in good condition.
- Grounds shall be free of litter or debris, clear of clutter and, generally, shall be kept neatly and attractively.
- The Historic Curatorship Program property shall be kept in accordance with the standards and goals established by the park or reservation management plan, including mowing schedules and historic landscape management.
- Where applicable, the Curator/Tenant shall maintain the landscaped areas of the property in accordance with recognized standards for maintenance of historically-significant landscapes.
- The Curator/Tenant shall exercise every effort to protect, stabilize and maintain significant landscape features for interpretation and/or restoration.
- Missing or deteriorated landscape elements will be replaced, in kind.

F. Environmental Hazards

- All Historic Curatorship Program properties shall be kept free of environmental contaminants
 or hazards including, but not limited to, unregistered vehicles, unused/antiquated agricultural
 machinery or vehicles or parts thereof, automotive lubricants, hazardous and/or toxic
 materials, used tires, tree stumps, road salts and other potential contaminants to the ground.
- The Curator/Tenant shall keep all buildings free of destructive rodents and other animals or
 pests that may cause damage to the property.
- If applicable, the Curator/Tenant shall maintain a septic system in compliance with the State of Massachusetts Sanitary Code (Title V) and shall maintain a potable water supply in accordance with State and local standards.

G. Sanitation

- Properties shall be kept clean and free of litter and debris.
- Trash and other wastes shall be removed on a regular basis.
- If the permitted uses of a property include the keeping of domestic or farm animals the Curator/Tenant shall remove animal wastes on a regular basis.
- The composting of organic wastes shall comply with all local health and safety regulations.
 Compost piles shall be located in areas approved by DCR and the

H. Permitting

The Curator/Tenant will be responsible for obtaining all necessary permits and approvals for work on the curatorship property. Special resources such as wetlands and archaeological sites contained within the curatorship property will be identified.

PART IV - REVIEW & INSPECTION

A. Review

Cyclical maintenance of the curatorship property may involve major changes to the building or landscape. Replacement of or significant repair to historic fabric, including landscape elements, will require DCR approval. In some cases, DCR will file a Project Notification Form (PNF) with the Massachusetts Historical Commission (MHC), as required under law. MHC must approve the project within 30 days in order for the work to proceed.

B. Inspection

Each year a DCR representative will inspect the property with the Curator/Tenant. Using the checklist found in Appendix A, the inspector will evaluate the condition of the property and the performance of the Curator/Tenant. A Curator/Tenant will be eligible for the credit if all of the requirements of the "Maintenance Services," as outlined in the Lease agreement, have been met.

The Curator/Tenant should inspect the property periodically to insure that the guidelines are being met prior to the annual inspection. From the ground, binoculars will make the inspection easier. The best time to observe the performance of the roof is during a moderate rain, when the drainage systems are in full use. The QuickChecks found in Appendix B will aid the Curator/Tenant in identifying areas which need attention. The checklists provided address general maintenance issues and should be customized to include special features or circumstances associated with a specific property.

PART V - MANAGING THE JOB

A. Planning Ahead

Curator/Tenants should develop a maintenance plan for the care and upkeep of the curatorship property. By taking the extra time to anticipate maintenance needs, Curator/Tenants will be able to plan for cyclical repairs and replacement of materials. Annual maintenance schedules and periodic inspection using the QuickCheck system will insure that the standard maintenance requirements are met.

B. Preservation Resources

Appendix D of these standards provides a listing of preservation resources which may guide the Curator/Tenant in developing a maintenance plan. The first section is a bibliography of books and publications pertaining to building and landscape history, maintenance and restoration. The second section is a list of non-profit preservation organizations in New England.

C. Good Habits

A resident of a historic property should be especially critical of the appearance of his/her property. Take a moment each week to look at the major components of the building - roof, windows, foundation, etc. - for any changes or unusual characteristics. This regular inspection will become both a good habit and a source of pride in the success of your work.

While the goal of proper maintenance is the increased longevity of a historic property, the major benefit is the satisfaction of a job well done.

APPENDIX A:

Annual Maintenance Inspection Checklist

This checklist will be used each year to evaluate the performance of the Curator/Tenant in maintaining the Curatorship property.

Historic Curatorship Program Annual Maintenance Inspection Checklist

Property Name:								
Date	Date of Inspection:							
Valu	Value of Annual Maintenance Credit:							
Cura	Curator / Tenant(s) present:							
	DCR Representative(s) present:							
			I. BUILDING EXTERIOR					
			A. Roof Structure and Materials	_				
yes	no	n/a		_				
			Are there any missing, broken, or damaged roof slates or shingles?					
			2. Are wooden shingles splitting and/or curling?					
			3. Are slates cracked?					
			4. Are there any signs of rusting?					
			5. Are there any indications of standing water, water back-up or other water damage? (Example: damage from ice dams, damaged or missing gutters)					
			6. Does any part of the roof sag or look out of alignment?					
			7. Is there any damage to the cornice, soffits or fascia boards?					
			8. Are there loose, rotten or missing gutters?					
			9. Is the paint on the gutters peeling from the gutter?					
			10. Do the gutters need to be cleaned and oiled with linseed oil?					
			11. Do the downspouts need to be adjusted and connected with the gutter?					

			12. Does the water from the downspouts need to be directed away from the house?
yes	no	n/a	
			13. Does the house need splash pads?
			14. Does the water collect near the foundation?
			Comments: Southeast and southwest roof faces need to be reroofed and reshingled. Rear (north) cornice of barn sagging slightly. Tenants recently installed new gutters to west roof
			B. Chimneys (from roof line up)
yes	no	n/a	
			1. Are the chimney flashings unsecured from either the roof or the chimney?
			2. Is the masonry cracked or crumbling?
			3. Are bricks and/or pargeting cracked or missing?
			4. Is the chimney leaning more than a few degrees?
			5. Is there bracing on the chimney?
			6. Are the chimneys in need of cleaning?
			Comments:
			C. Exterior Walls
yes	no	n/a	
			I. Are the walls warped or bulging?
			2. Are doors and windows misaligned with their frames or operating improperly?
			3. Are there signs of settlement around the doors and windows?
			4. Is the exterior siding placed on the building inproperly?
			5. If wooden ext walls, does the exterior siding undulate, buckle

			or curl?
			6. If brick or masonry walls, are mortarjoints spalled, washed out or broken?
			Comments:
			D. Exterior Woodwork
yes	no	n/a	4 1 11 11 11 11 11 11 10
			1. Is the woodwork less than 6"-8" from the ground?
			2. Do probes into the wood indicate more than a ¼ "penetration?
			3. Is there any rotted or splitting wood?
			4. Are there any signs of dirt (in the form of termite mud tunnels) on foundations, steps and cellar walls?
			5. Are there any signs of insect boring, such as holes, sawdust, wood penetration, or other indicators?
			6. Are vines and other vegetation located close to the house, thus keeping moisture close to the house and inviting insect damage and rot?
			Comments:
			E. Exterior Trim and Finishes
yes	no	n/a	4 And the continue of the cont
			1. Are there any clapboards or sheathing materials missing from the exterior?
			2. Are there any loose, cracked or damaged clapboards or sheathing materials?
			3. Are sheathing materials improperly attached to the wall?
			4. If aluminum, vinyl or asbestos siding is over the original sheathing, is artificial siding cracking, buckling or splitting, etc.? Does the siding prevent the building from breathing?

			5. Is decorative woodwork improperly secured to the house?
			6. Do decorative features, windows, door frames and other areas need to be caulked and painted?
			7. Is paint peeling, flaking or blistering? (If so, check for moisture in the walls and presence of a vapor barrier)
			8. Do any joint areas require caulking or flashing to prevent moisture penetration?
			9. Does the surface contain mildew, chalking or other paint surface reaction?
			Comments:
			F. Doors and Windows
yes	no	n/a	
			I. Are doors and windows improperly fitted in their openings?
			2. Is the glass cracked, loose or improperly glazed or painted?
			3. Is there any rotted wood in the sills or lower rails?
			4. Is weather stripping failing?
			5. Are exterior storm windows and doors uninstalled?
			6. If exterior storm windows are not feasible for historic or technical reasons, are interior storm windows installed?
			Comments:
			G. Foundation and Masonry
yes	no	n/a	
			1. Is water collecting at the foundation walls?
			2. Is the foundation or masonry cracked or crumbling?

			3. Are bricks, stone and/or parging cracked or missing?
			4. Is the mortar eroding or loosening?
			5. Are there serious signs of building settlement (ie., more than hairline cracks in the masonry)?
			6. Is there spalling, cracking or crumbling of stone trim? (Example: if there is brownstone, is it flaking?)
			7. Are there any signs (bulges, cracks, etc.) of separation of brick courses?
			Comments:
			II. BUILDING INTERIOR
yes			A. Cellar/Basement
	no	n/a	
	no	n/a	1. Is the basement inadequately ventilated?
	no	n/a	Is the basement inadequately ventilated? Does the basement small damp and moldy?
	no	n/a	
	no	n/a	Does the basement small damp and moldy? 3. Do sills or joists show signs or termite or insect damage? (Probe
		n/a	 2. Does the basement small damp and moldy? 3. Do sills or joists show signs or termite or insect damage? (Probe wood to determine extent of damage) 4. Are there any signs of building sagging or deflection? (If so,

			7. Is there any flooding in the basement?
			8. Is the bulkhead unsecured or improperly flashed and caulked?
			9. If there is a crawl space, is it opening and allowing moisture to enter the house?
			10. Is the foundation mortar separating from the masonry foundation or cracking?
			Comments:
			D. Einighod Spaces
V00	no	n/0	B. Finished Spaces
yes	no	n/a	Are there any signs of damp plaster on ceilings, walls, around
			chimneys, under kitchen or bathrooms, or in other applicable locations?
			2. Is there any vibration or "bounce" to the staircase or other floor area of the house, indicating potential structural problems?
			3. Do floors sag or vibrate when there is a lot of foot traffic or jumping?
			4. Are there prominent cracks in walls, floors or near window or door casings which indicate settlement?
			5. Are these cracks old or recently created?
			Comments:
			C. Insulation and Ventilation
yes	no	n/a	
			1. Are the exterior walls uninsulated? If not, what insulating material is used, and was a vapor barrier installed?
			2. Is attic insulation improperly installed?
			3. Does the attic insulation restrict adequate ventilation?

			Comments:
			D. Attic
yes	no	n/a	
			1. Are there any signs of leaks (staining) on the attic rafters or sheathing?
			2. Is the attic improperly ventilated, causing moisture and mildew to collect on the underside of the roof?
			3. Are there any sagging rafters, broken collar ties or other structural deficiencies?
			4. Are the chimney bricks in the attic loose or in bad condition?
			5. Are there any holes in the chimney or indication that there is a failure of the present chimney flue to contain the heat generated from the heating system and/or fireplaces?
			6. Is there any evidence of insect infestation (sawdust, borings, etc.) in wooden members (rafters, purlins or sheathing)?
			Comments:
			III. BUILDING SYSTEMS
			A. Water Systems and Plumbing
yes	no	n/a	
			1. Is water pressure inadequate?
			2. If a private well, is the pump malfunctioning?
			3. If a private well are there any issues with the drinking water quality?
			4. Are there any leaks in the water lines?
			5. Are the kitchen and bathroom fixtures improperly installed, causing leaks, "sweating", or other water damage?
			Comments:

			B. Heating System
yes	no	n/a	D. Heating System
			Is the heating system malfunctioning?
			C. Sewage/Septic Systems
yes	no	n/a	
			1. Are there odors emanating from the septic tank/field or sewage line area?
			2. If a septic system, are there any depressions or "wet spots" in the ground area adjacent to or within the septic field?
			3. Does the septic tank need pumping?
			Comments:
		,	D. Natural Gas Systems
yes	no	n/a	1. Are there any natural goal prepare adors amonating from the
			1. Are there any natural gas/propane odors emanating from the system?
			2. If a propane tank is located on the property, is it improperly secured?
			Comments:
			E. Electrical Systems
yes	no	n/a	
			1. Are overhead electrical lines coming into the property disconnected or uncovered?
			2. Are poles supporting the wires too close to tree limbs and other encumbrances?
			3. Does the present amperage violate the Mass. Building Code and/or local building code?

			4. Have any major electrical appliances been added to the system within the last year?
			5. Do any lights or electrical utilities fail when turned on?
			6. Do bathroom, laundry room and kitchen electrical systems need ground fault outlets?
			7. Beyond regional electric systems failures, have there been any electrical failures, "black outs", or other problems system within the last year?
			8. Are any electrical lines located close to water sources?
			9. Are any outside electrical plugs and lights exposed to weather damage?
			Comments:
			F. Telephone/Cable System
yes	no	n/a	
			Are the overhead telephone lines coming into the property loose or disconnected?
			2. Are poles supporting the wires too close to tree limbs or other encumbrances?
			Comments:
			G. Fire/Security Systems
yes	no	n/a	
			I. If there is a fire suppression system, is it due for an annual check up?
			2. If there is a home security system, is it due for an annual check up?
			Comments:

			IV. WALKWAY AND DRIVEWAY MAINTENANCE
VOC	no	n/a	IV. WALKWAI AMD DIGVEWAI MAINTENAMOL
yes	no	II/a	1. Are the walks and driveway surfaces in had condition, with any
			Are the walks and driveway surfaces in bad condition, with any uneven or cracked surfaces?
			2. If gravel, stone or brick paths, are any materials missing and is infill material needed to supplement existing way?
			3. If an asphalt material, does surface need a seal coat?
			Comments:
			V. MISCELLANEOUS PROVISIONS
yes	no	n/a	
			I. Are there any systems and/or property features that warrant special mathtenance considerations and/or unique treatment? If so, what are they and what special provisions need to be made?
			2. Are trash containers securely covered to prevent animals from getting in?
			3. Are trash containers left in the street after trash pickup?
			4. Where waste collection is not available, is no more than two weeks worth of waste collected located on the site?
			5. Are recycling materials uncovered?
			6. Is more than a month's worth of recycled materials located on the site?
			7. Are ladders, building materials and other construction-related equipment properly secured to limit theft and insurance liability?
			8. Are boats, mobile homes, trailers, recreational vehicles, etc., in plain view?
			9. Is the yard littered with children's toys, bicycles, plant pots, garden tools, barbecue grill and other items?
			10. Is the outside laundry line screened in plain view?
			Comments:

			VI. COMPLIANCE AND COMPATIBILITY
VOC	no	n/a	THE COMME DIVINED FROM THE BELLT
yes	no	11/ a	
			1. Is the overall appearance of the curatorship site incompatible with the conservation and recreation goals of DEM, as well as with those of the facility management plan?
			2. Has the Curator/Tenant failed to comply with the reporting requirements of the lease agreement?
			Comments:
			VII. REMINDERS
yes	no	n/a	VII. REMINDERS
yes	no	n/a	VII. REMINDERS 1. Are there any unpaid taxes on the property?
yes	no	n/a	
yes	no	n/a	Are there any unpaid taxes on the property?
yes	no	n/a	1. Are there any unpaid taxes on the property? 2. Is the insurance coverage inadequate or out of date?

	APPENDIX B:						
	Annual Building and Landscape QuickChecks						
This checklist should be used throughout the year by a Curator/Tenant to identify potential problem areas and to prepare for the annual inspection of the Curatorship property.							
Historic Curatorship Program Annual Building Maintenance Quick-Check							
Check when complete. List any items needing further attention.							
3 MONTH INSPECTION	Date:						

 Inspect yard to see that it is properly maintained/picked up Check foundation plantings for moisture retention Check roof for debris Clean downspouts and gutters. Oil gutters Check fuse box for proper operation and amperage of fuses Follow Up On: 	
6 MONTH INSPECTION Inspect foundation for movement, spalling or other damage Inspect and treat for insect damage and/or nests Check for any structural deficiencies in wooden members Inspect joint areas for caulking and flashing Check condition of exterior paint Check condition and energy efficiency of doors, windows and be check gas/propane system for leaks and proper connection to Inspect electrical lines to determine if they are free of obstruction Inspect interior electrical systems for proper operation Test fire suppression system for proper operation Test security alarm system for proper operation Follow Up On:	structure
9 MONTH INSPECTION [] Check exterior walls for bulges, settlement, and curling clapbox [] Check condition of exterior woodwork (trim, cornerboards, post [] Review plumbing system for leaks, "sweating" and general ope [] Inspect telephone lines to determine if they are free of obstruct Follow Up On:	ts,ballustrades) eration
12 MONTH INSPECTION [] Inspect roof for leaks, shingle/slate coverage, structural change [] Clean heating system (ducts and vents) [] Inspect and clean himney [] Check insulation materials and vapor barriers [] Inspect septic system for proper operation and/or pumping [] Inspect driveways and walkways [] Test private well water per State and Local regulations Follow Up On:	es, proper ventilation
Historic Curatorship Program Annual Landscape Maintenance Quick-Check Check when complete. List any items needing further attention.	Data:
3 MONTH TASKS [] Inspection of yard [] Removal of trash/debris [] Mow lawn regularly (April-November) [] Weed/water lawn and planting beds (April-November) [] Mulch (seasonal) [] Check irrigation systems	Date:
Items for Follow Up:	
6 MONTH TASKS	Date:

Apply fertilizers, lime and herbicides to lawns and plants (as needed) Apply soil nutrients (as needed) Rake leaves, general yard clean up (seasonal) Aerate Lawn Replace plant materials (spring and fall for trees and shrubs) Prune trees and shrubs (spring and fall) Clear paths and trails Mow meadow (once per year or as needed) Spray fruit trees Divide perennials							
Items for Follow Up:							
Items for Follow Up:							
12 MONTH TASKS Date: Test soils for Ph and other factors (add supplements as needed) Clean drainage structures Repoint masonry on garden structures (as needed)							
Items for Follow Up:							

APPENDIX C:

Cyclical Building and Landscape Checklists

This checklist should be used by a Curator/Tenant periodically during the term of the lease in order to anticipate significant work items.

Historic Curatorship Program Cyclical Building Maintenance Checklist

Check when complete and write in date(s) of work.

2-5 YE	AR TASKS
0	Apply fungicide treatment to wooden roof shingles.
[]	Check roof air circulation
	Repair windows and doors for damage and energy efficiency
	Check and clear property storm drainage system
<u> </u>	Install basement vapor barrier (as needed)
	Add insulation to walls, basement ceiling and attic (as needed)
==	Check house for proper ventilation - basement, attic and living area
<u> </u>	Pump septic system (every two years or more as necessary)
5-10 YE	AR TASKS
	Repoint chimneys and foundations, add related flashings (as needed)
	Paint interior walls, trim and ceilings
	Paint exterior siding, trim and windows
	Replace gas meter (every 7 years)
	Replace hot water tank (every 5-10 years)
44 45 V	EAR TAOKO
	EAR TASKS
<u> </u>	Replace linoleum and similar flooring materials
<u> </u>	Refinish wood floors (as needed)
	Repair or replace private well pump
	Replace gas dryer
[]	Replace propane tank
16-20 Y	EAR TASKS
П	Replace roofing materials and wooden sheathing as necessary
Ö	Replace synthetic (vinyl, aluminum, etc.) as needed
21_30 V	EAR TASKS
	Replace wooden clapboard, trim and/or decorative elements (as needed)
	Repoint masonry (as needed)
	Repair cracks from structural settlement (as needed)
	Replace gas boiler
	Replace gas or electric stove
Ŭ <u></u>	Replace water lines to property
SPECIA	AL CIRCUMSTANCES/CONDITIONS
	Elevator and dumbwaiter inspections as per state regulations
	Curatorship Program
Cyclica	I Landscape Maintenance Checklist
Cyclica	
-	when complete and write in date(s) of work.
Check v	when complete and write in date(s) of work.
Check v	AR TASKS
Check v	

0 0 0	Stabilize stone walls Stabilize garden structures Replace lawnmower blades	
5-10 YE	AR TASKS Rejuvenate plant beds (as needed) Replace/stabilize driveway materials	
11-15 YEAR TASKS [] Replace/repair garden water system [] Replace/Repair wooden fencing and posts		
16-20 Y ∏	EAR TASKS Replant lawn area (as needed)	

APPENDIX D:

Average Lifespan of Some Common Building Materials

AVERAGE LIFESPAN OF SOME COMMON MATERIALS

I. BUILDING EXTERIOR

II.

A. ROOT				
•	Asphalt Shingles	15-20 years		
•	Slate/Tile	60-80 year		
•	Wooden Shingle	20-30 years		
•	Metal	20-30 years		
B. Chimne	ys			
•	Brick/Stone	_10-15 years (repoint)		
•	Clapboard or Metal cover	15-20 years		
•	Clay Flue Liner	75 years		
C. Masonry	/ Foundation	10 years (repoint)		
D. Exterior Walls				
•	Wooden Clapboard	25 years		
•	Wooden Shingles	40 years		
•	Paint	5-7 years		
•	Brick, stone, concrete block	25 years (repoint)		
•	Synthetic siding (aluminum, vinyl)	20-30 years		
E. Exterior Woodwork_		Indefinitely		
		(with proper maintenance)		
BUILDING INTERIOR				
A. Finishes	S			
•	Paint, varnish and wallpaper	7-10 years		
•	Wood Flooring	5-10 years (refinish)		
•	Linoleum	10-15 years		

B. Building Systems

1. Plumbing		
Lead pipes	replace immediately	
water meter	7-10 years	
well pump	10-20 years	
• fixtures	varies	
• septic	pump every 5 years	
2. Heating system		
Gas meter	7 years	
Boiler	15-20 years	
	(repair @ 10 yrs)	
Hot Water Tank	5-10 years	
• Dryer	10-15 years	
Oil Tank	25-30 years	
	(inspect @ 5 yrs)	
3. Electrical System	50 years	
pull cords	5 years	
 switch plates and outlets 	15 years	
lighting fixtures	20 years	
electric heat pump	20-25 years	
	(repair @ 10 yrs)	
baseboard wiring	2-5 years (repair)	
4. Telephone Cable50 years		
	(repair @ 10 yrs)	
5. Insulation (Check for settlement) _	2 years	
6. Life Safety Systems		
Smoke detectors	15 years	
)10 years	

APPENDIX E:

Preservation Resources

PRESERVATION RESOURCES

State Agencies

Massachusetts Department of Conservation and Recreation (DCR)
Office of Cultural Resources
100 Cambridge Street - Room 1404
Boston, MA 02202
(617) 727-3160

Massachusetts Historical Commission (MHC) 220 Morrissey Boulevard Boston, MA 02125 (617) 727-8470

Non-Profit Organizations

Historic Massachusetts, Inc. (HMI) Old City Hall 45 School Street Boston, MA 02108 (617) 723-3383

Massachusetts Horticultural Society 300 Massachusetts Avenue Boston, MA (617) 536-9280

Society for the Preservation of New England Antiquities (SPNEA) 141 Cambridge Street Boston, MA 02202 (617) 227-3956

SPNEA Conservation Center 185 Lyman Street Waltham, MA 02154 (617) 891-4882

National Organizations

National Trust for Historic Preservation Northeast Regional Office 7 Faneuil Hall Marketplace - 5th Floor Boston, MA 02109 (617) 523-0885

National Park Service Preservation Assistance Division P.O. Box 37127 Washington, D.C. 20013-7127 Boston Office - (617) 223-5200

Olmsted Center for Landscape Preservation 99 Warren Street Brookline, MA (617) 566-1689

APPENDIX F: SUSTAINABILITY RECOMMENDATIONS

Historic buildings are often regarded as the antithesis of the green building; with images of drafty windows, leaky roofs and outdated systems. In actuality, pre-World War 2 era buildings are in many cases far more energy efficient than their late-20th century counterparts. The National Trust reports that it will take 65 years for a building built today to recoup the net energy lost in the demolition of a historic structure, supporting the philosophy that "the greenest building Is one that already exists." Still, historic buildings present a different set of challenges, and methods and technologies that might be easily installed in a newer house may require more creativity in a property with significant historic features. Below are some helpful resources to use when considering the integration of sustainable methods and technologies in the restoration of an historic building.

http://www.masstech.org/IS/public_policy/DG/resources/2007-04-18-MA-Exec-Order-Leading-by-Example.pdf

Massachusetts Executive Order No. 484: Leading by Example; Clean Energy and Efficient Buildings

"The Leading by Example Program was created by Executive Order No. 484, issued by Governor Deval Patrick on April 18, 2007 to help state agencies minimize the environmental impacts of their operations and activities and to promote innovative solutions to critical environmental problems."

http://www.mass.gov/envir/Sustainable/

Massachusetts Executive Office of Energy and Environmental Affairs' Leading By Example Program

"The Leading by Example Program was created by Executive Order No. 484, issued by Governor Deval Patrick on April 18, 2007 to help state agencies minimize the environmental impacts of their operations and activities and to promote innovative solutions to critical environmental problems."

http://www.nexusboston.com/

NEXUS Boston

"Located in downtown Boston and pursuing LEED-CI, NEXUS includes over 9,000 square feet of product showroom, resource and samples libraries, and networking and event space. All are welcome to come ask questions, research topics, and attend tours and events on green building and sustainable design innovation."

http://www.usgbc.org

U.S. Green Building Council

"The U.S. Green Building Council is a 501(c)(3) non-profit community of leaders working to make green buildings available to everyone within a generation."

http://www.regreenprogram.org/

Regreen Sustainability Guidelines

"The American Society of Interior Designers' Foundation and the U.S. Green Building Council have partnered on the development of best practice guidelines and targeted educational resources for sustainable residential improvement projects. This program

will increase understanding of sustainable renovation project practices and benefits among homeowners, residents, design professionals, product suppliers and service providers to build both demand and industry capacity."

http://www.bostonbmrc.org/bostonbmrc/about us.html

Boston Building Materials Resource Center

"The Building Materials Resource Center is a nonprofit building materials reuse project. We accept donations of good-quality used and surplus building materials and sell them to the public at low prices. In addition, low- and moderate-income customers and nonprofits are eligible for a considerable discount on those prices. The BMRC also offers a wide range of homeowner support services, including home improvement classes, inhome consultations, a do-it-yourself window repair shop, and much more."

http://www.preservationnation.org/issues/sustainability/

National Trust for Historic Preservation: Historic Preservation and Sustainability The National Trust has recently launched an initiative to bring attention to sustainability issues and historic preservation. This site contains a number of useful resources for implementing green principles in historic rehabilitation.



PROPERTIES CURRENTLY UNDER AGREEMENT

Litchfield House at Great Brook Farm State Park (Carlisle)
This mid nineteenth-century Greek Revival farmhouse and barn sit in a wooded glen in Great Brook Farm State Park. The current tenants signed a twenty-five year lease in 1996 and are in the process of restoring the house and barn.





Gatekeeper's House and Shed at Lowell Heritage State Park (Lowell)

This 1847 house, once the residence of the Gatekeeper of the Pawtucket Dam's lock and canal systems, sits in a prominent spot overlooking the Merrimack River. The current tenant entered a ten-year lease in 1998 and currently uses it as a single family residence. DCR performed basic rehabilitation work on the barn and house prior to occupancy.



This 1901 Colonial Revival building overlooks placid Sunset Lake in Gilbert Hills State Park. The current tenants have entered into a twenty-five year lease in 1996 and have fully restored the house and are in the process of restoring the historic garden landscape.





Swann Lodge and Barn at Beartown State Forest (Monterey)

This turn of the century house and barn are currently under restoration. The tenants, Youth Enrichment Services (YES), signed a twenty-five year lease in 2001. YES is using the property to provide outdoor recreation programming to urban youth and the elderly.

Glenledge Cottage (Viereck House) at Halibut Point State Park (Rockport)

This late 19th century Queen Anne cottage is located in a wooded setting in seaside Halibut Point State Park. The current tenants signed a twenty year lease in 1999 and are currently in the final stages of rehabilitation of the house as a single family residence.





Bradley Palmer Mansion, Coach House and Carriage Garage at Bradley Palmer State Park (Topsfield)

This unique Tudor-Revival style early twentieth century mansion features a rubblestone exterior and elaborate medieval-inspired interiors. The house was built by famed lawyer and diplomat Bradley Palmer, and hosted President Taft and General George Patten among others. The current tenants signed a fifty year lease in 1997, have restored the mansion and are currently operating the mansion as Willowdale Estate, an events and overnight facility.

Farmhouse at Maudslay State Park (Newburyport)

This 1800 farmhouse sits at the entrance of Maudslay State Park. The current tenants have completely restored the property and are using it as a single family residence.





Walter Baker Administration Building (Dorchester / Lower Mills)

The stately Administration Building was the heart of the Baker Chocolate Factory, Keen Development Corporation, in conjunction with PreservatiONMASS, was chosen as a tenant in November 2000 and signed a fifty year lease. The restoration of this 1919 Classical Revival office building as artist lofts was completed in 2002.

Crosby Mansion and Graham House at Nickerson State Park (Brewster)

Following the passage of legislation (Section 224 of Chapter 127 of the Acts of 1999), a 25-year lease was signed outside of the Curatorship Program between DCR and the Town of Brewster for the 1888 mansion and two 20th century cottages. The town plans to lease the restored cottages and invest the resulting income into the restoration of the mansion.



For more information on the program, please contact:

Kevin Allen Historic Curatorship Program Manager Office of Cultural Resources 251 Causeway Street, Suite 700 Boston, MA 02114-2119 HCP.Requests@state.ma.us

BUILDING CONDITIONS SURVEY BASCOM LODGE

MOUNT GREYLOCK STATE RESERVATION LANESBOROUGH, MASSACHUSETTS

23 June 2007



ttl-Architects LLC 28 Danforth Street Portland, ME 04101 T (207)761-9662 F (207)761-9696

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V

GLOSSARY OF TERMS

- alligatoring once the bond between paint layers has broken, moisture is able to penetrate the surface cracks causing the wood to swell. The cracking of the paint becomes an overall pattern of horizontal and vertical breaks in the paint layers that look like reptile skin.
- bay a major spatial division of a building marked off by vertical or transverse supports.
- cladding a protective cover, referring to the exposed surface of an exterior wall on a building.
- conservation action taken to prevent decay and preserve the historic significance of a building.
- consolidation the physical addition or application of adhesive or supportive materials into the actual fabric, in order to ensure continued durability of the surfaces or structural integrity.
- corrosion the gradual deterioration of metal by chemical action, as when exposed to weather, moisture, or other corroding agents.
- deteriorated to grow worse in quality or state.
- dutchman a piece of material spliced into an element comprised of the same material where a section has deteriorated or has been removed.
- fabric referring to the building materials and finishes.
- frass bore dust left by wood-boring insects.
- frieze a decorative band, as one along the top of an interior wall, immediately below the cornice, or a sculptured one in a string course on an outside wall.
- LVL Engineered wood members constructed of bonded wood veneers.
- meeting rail the rail of each sash in a double-hung window that meets at the rail of the other when the window is closed.
- muntin a strip of wood separating and holding panes of glass in a window.
- patch to mend, cover, or fill up an opening, a hole or weak spot according to recognized preservation methods.
- ponding in a building, referring to a standing body of water, usually due to poor drainage.
- pressure-treated referring to wood impregnated with chemicals applied under pressure to increase its resistance to decay and insect infestation.
- purlin a horizontal structural member spanning between rafters or trusses to support a roof deck.

- repair when referring to historic materials, the least degree of intervention possible such as patching, piecing-in, splicing, consolidating, or otherwise reinforcing or upgrading according to recognized preservation methods to maintain architectural character and historic fabric.
- restoration in a building, returning to its appearance at a particular time in history. Usually the original appearance when construction was completed.
- SHPO abbreviation for State Historic Preservation Officer.
- spalling the chipping or scaling of a hardened concrete or masonry surface, usually caused by freeze-thaw cycles.
- stabilization to prevent or slow down further deterioration. Usually a temporary measure.
- substrate any material that serves as a base or foundation.
- swale a low-lying or depressed stretch of land.

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ADMINISTRATIVE DATA

ttl-architects were retained in April 2007 by the Commonwealth of Massachusetts, Department of Conservation and Recreation (DCR), to prepare an assessment for the Bascom Lodge outlining necessary repairs for the property and associated costs.

This report has been a cooperative effort between the architect and DCR. We wish to thank Kevin Allen and Clebe Scott for facilitating the work of this report.

This study has been prepared solely for the Department of Conservation and Recreation. The report is not to be used by any other party, and if it is, ttl-architects, LLC cannot be held accountable for any information contained within the report.

The report contains an assessment of the architectural, structural, and building system elements; prioritized recommendations for repair; sketch plans and elevations; cost estimates and an appendix of supplemental materials gathered during the survey.

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1.0 EXECUTIVE SUMMARY

1.1 Introduction

ttl-architects were retained by the Commonwealth of Massachusetts, Department of Conservation and Recreation (DCR) in April 2007 to complete an assessment for Bascom Lodge outlining current conditions and necessary repairs. The report contains an assessment of the architectural, structural, and building systems elements; recommendations for repair; cost estimate; and sketch drawings. The following is a summary of the most significant findings. These and other issues are discussed in greater detail in the full report.

1.2 Historical Background

The Bascom Lodge is a nineteenth century overnight facility for visitors to the summit of Mount Greylock that has been minimally altered by alterations. The lodge was named in honor of John Bascom, one of the first commissioners of the Mount Greylock Reservation Commission and a philosophy professor at Williams College. The lodge was built by the Civilian Conservation Corps between 1932 and 1937. The lodge was designed by a local Pittsfield architect Joseph MacArthur Vance. The CCC used locally harvested and milled red spruce on the interior, especially for paneling. The exterior fieldstone walls metamorphic gray-colored Greylock schist and chimneys were built using locally quarried metamorphic gray-colored Greylock schist. The building are normally occupied only during the summer months.

1.3 Assessment of Existing Conditions and Recommendations for Repair

ttl-architects reviewed conditions at Bascom Lodge on 17 May 2007 and 15 June 2007. The architectural examinations of the property were visual only. Structural examination of the Bascom Lodge was visual only; no destructive testing was undertaken to assess concealed or readily inaccessible areas of the structure. Overall, the building is in good condition and is suitable for reuse as a lodging facility.

Recommendations

- Many of the building's interior finishes and systems are dated and have reached the
 end of their useful life. Replacement of the systems and interior finishes will be
 significant. Prioritized recommendations for the replacement of interior finishes and
 building systems are included in the body of the report.
- Moderate deterioration of the building's materials has occurred as the result of
 inactive and active leaks on the interior and perimeter of the building. Replacement
 of the deteriorated materials will be necessary, primarily in the basement. Through
 our firm's field assessment a number of deteriorated elements were identified.
 Prioritized recommendations for the repair and preservation of deteriorated elements
 are included in the body of the report.
- Mold growth on the building's interior finishes has occurred because of a lack of regular seasonal activity at the site and insufficient ventilation. Mechanized exhaust fans or large louvers should be installed in some of the winter protection panels to increase airflow during warmer months. Moldy materials should be removed or cleaned.

- The current structure for the Bascom Lodge is in relatively good condition. No major areas of deterioration were noted. With the exception of the east wing's first floor framing, the framing is adequate for use as a hospitality venue. The actions needed to correct the framing exceptions can be readily designed and implemented without extraordinary temporary measures being needed.
- At the roof rafters, positive connection between rafters and bearing wall plates should be installed to guard against uplift forces under seismic event and high wind (uplift) conditions. These seismic/hurricane anchors are easily installed with nails and are inexpensive and will require access to the tops of the exterior bearing walls from within.
- The building does not meet current seismic code requirements. The updating of the structure to meet current Code seismic requirements for a public lodging building would require more extensive research and analysis that go beyond the scope of this assessment. It is recommended that such research and analysis be performed prior to moving forward with any renovation or updating plans.
- The active infestation of pests has occurred because of a lack of regular activity at the site. Pests need to be controlled or exterminated. The exterior of the building needs to be sufficiently protected to control further deterioration of the building's elements from pests. Until the building is rehabilitated it should be maintained and monitored for further deterioration.
- The interior of the building is furnished. Fabrics, mattresses, linens, carpets, and debris should be removed from the house to facilitate maintenance and monitoring and inhibit moisture retention and mold growth.
- Existing mechanical and electrical systems are outdated and should be replaced with more efficient options. In addition the electrical system is under-designed for lodging use and does not have safety features like ground fault interrupters.
- The historic building does not meet all the requirements of the ADA. The west wing of the lodge was rehabilitated to accommodate ADA lodging and rest rooms. However some additional modifications to hardware, controls, and fire detection and alarm system should be made to the maximum extent feasible in order to meet the minimum building requirements of the ADA.
- The building does not meet the State Energy Code. The insulation values of the building's walls, roof, and windows should be improved to the maximum extent feasible to meet State Energy Code requirements.
- The building does not meet current life safety standards. There are no heat detectors, carbon monoxide detectors, or a sprinkler system. At a minimum a monitored and hard-wired fire detection system with automatic notification should be installed until the lodge can be rehabilitated.
- Existing historic details should be preserved and restored. New materials and systems should be installed with care and creativity to minimize the destruction of extant historic material and detailing.
- Additional data is necessary to have a complete understanding of the scope of necessary repairs. Additional data that should be developed includes:
 - A hazardous materials survey.
 - Localized destructive testing to ascertain the condition of concealed and/or readily inaccessible building elements, i.e. structural framing. Exposure and investigation of the second floor framing, the exterior walls, and exteriors of the foundation sills is necessary.

1.4 Cost Estimate

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Based on a review of the existing conditions prioritized recommendations for preservation and repair were made. ttl-architects prepared a cost estimate for each priority level. Priority One recommendations are the most urgent and should be completed as soon as possible to stabilize and protect the structure from damage from weather and moisture. Priority levels two and three are less urgent, but should be completed within the next five years as part of a rehabilitation plan.

Every effort was made to include work that can be anticipated at this time. Because a detailed survey involving selective demolition and probing was beyond the scope of this report, an allowance of 15% should be made for hidden conditions. All budget cost are in 2007 dollars and no adjustments have been made for inflation.

Total Priority I Construction Cost	\$ 147,624
Total Priority II Construction Cost	\$961,362
Total Priority III Construction Cost	\$60,427
Total Phase Construction Cost	\$1,169,413

1.5 Bibliography

ttl-architects consulted a variety of sources that were made available by the Department of Conservation and Recreation, that were found at the Massachusetts Historical Commission, and that were available online.

2.0 HISTORICAL BACKGROUND

Bascom Lodge is located at the summit of Mount Greylocknear the junction of Notch, Rockwell, and Summit Roads. The lodge is located within the Mount Greylock Summit Historic District and was listed on the National Register of Historic Places in April of 1998. It is named in honor of John Bascom, one of the first commissioners of the Mount Greylock Reservation Commission and a philosophy professor at Williams College.

The lodge was constructed by the Civilian Conservation Corps (CCC) as part of their improvements on the mountain between 1933 and 1940. The lodge and and other summit buildings were designed by Joseph MacArthur Vance. According to the National Register of Historic Places nomination form, construction on Bascom Lodge began in 1932 and was completed in 1937.

Joseph MacArthur Vance (1868-1948) was a Pittsfield architect, originally from the Mid-West. He graduted from the Massachusetts Institute of Technology in 1891. He worked briefly in Boston before moving to Pittsfield in 1894 where he practiced for the next fifty years. Notable Pittsfield projects include the Colonial Theatre (1903), the Masonic Lodge (1914), the Allen Hotel (1915) (NR listed 1983), and the grandstand at Wahconah Park (1927) (NR listed 2005).

The CCC was established by Presidential order in 1933 to employ jobless men in the construction of public works. The CCC 107th company was located at Mount Greylock in 1933 in a camp on Sperry Road to the south of the summit. The CCC built most of the extant features at the summit and improved the reservation's roads. Bascom Lodge, along with the nearby Thunderbolt Shelter and Summit Garage, were constructed in a rustic style popular in the American Park Movement (late 19001930s). The use of native materials and naturalistic design principals integrate the buildings into the landscape and optimize the views of the surrounding countryside.

The west wing of the Lodge was constructed in the early 1930s. The central two-story portion and the east wing were added in the summer of 1936-1937. The CCC used locally harvested and milled red spruce on the interior, especially for paneling. The exterior fieldstone walls metamorphic gray-colored Greylock schist and chimneys were built using locally quarried metamorphic gray-colored Greylock schist.

CONDITION ASSESSMENT AND RECOMMENDATIONS

INTRODUCTION

The project team reviewed conditions at the Bascom Lodge on 15 May 2007 and 15 June 2007. The weather was foggy with an ambient temperature of 46°F, the relative humidity was 52%, and the Dew point was 29°F at midday on 15 May 2007. The weather on the 15 June 2007 was partly sunny with a light wind with an ambient temperature of 62°F, the relative humidity was 52%, and the Dew point was 45°F in late morning. The local weather pattern prior to the May visit had been exceedingly wet and cool.

The examinations of the property were visual only. Examinations of the buildings' elevations were made from the ground. Examination of the building's interiors included the first, second and basement stories. The goals of the visual examinations were to determine the condition of existing fabric and current needs and options for repair.

This chapter summarizes the general findings of the present conditions. After each finding, general recommendations for conservation and repair are provided. The recommendations have been prioritized as level one, two, or three. Level one recommendations are generally ones that are required to stabilize the structure, prevent further deterioration, or present immediate life safety/code concerns. Priority level two items are necessary to make the building habitable, and include complying with modern life safety and code issues. Priority three items are primarily cosmetic repairs or the restoration of earlier fabric that has been altered. Level one recommendations should be completed within the next one to two years, and all recommendations should be completed within the next five years unless indicated otherwise.

Conditions are defined as good, fair, or poor based on criteria developed by the National Historic Landmark Condition Assessment Program. All work should be performed by a firm having not less than five (5) years successful experience in comparable work for at least three (3) buildings similar to, or qualified to be listed in the National Register of Historic Places, and employing personnel skilled in the restoration processes and operations indicated.

An element is evaluated as Good when:

- the element is intact, structurally sound and performing its intended purpose;
- there are few or no cosmetic imperfections;
- the element needs no repair and only minor or routine maintenance.

An element is evaluated as Fair when:

- there are early signs of wear, failure, or deterioration, though the element is generally structurally sound and performing its intended purpose;
- there is failure of a sub-component of the element;
- replacement of up to twenty-five percent of the element or replacement of a defective sub-component is required.

An element is evaluated as Poor when:

- the element is no longer performing its intended purpose;
- the element is missing;

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- deterioration or damage affects more than twenty-five percent of the element and cannot be adjusted or repaired;
- the element shows signs of imminent failure or breakdown;
- the element requires major repair or replacement.

Any necessary repairs for the Bascom Lodge should follow several basic principles common to the maintenance of historic buildings and adapted from *The Secretary of the Interior's Standards for the Treatment of Historic Properties* published by the National Park Service and available on line at http://www2.cr.nps.gov/tps/standquide/index.htm.

- 1. Deteriorated architectural features should be repaired rather than replaced wherever possible.
- 2. When replacement of original building material is necessary, new materials should match the material being replaced in composition, design, color, texture, and other visual qualities.
- 3. Replacement of missing architectural features should be accurately duplicated based on historical or physical evidence rather than conjecture.
- 4. Repair methods, such as surface cleaning of the building, should be undertaken using the gentlest methods possible.

These principles recognize that historic materials and details have proven records for durability and compatibility, and that a small amount of maintenance at regular intervals avoids large investments in repairs. If new materials are incorporated into the structure, care must be taken to assure that their physical properties do not conflict with the physical properties of surrounding materials. If materials are improperly applied, it may cause or accelerate physical deterioration of the historic building.

SITE

The building is located at on the southern side of the summit of Mount Greylock in the Mount Greylock State Reservation. The lodge is part of the Mount Greylock Summit Historic District. The area around Bascom Lodge was surveyed by Accord Engineering and Surveying Inc. in 1997. A series of paved paths and wear paths (Figure 2) connect the lodge, parking area, trails, and the other summit buildings. There is a small paved parking area to the west of the building that accommodates handicap parking (Figure 3). The area around the building is sloped from north to south. A stone retaining wall transitions the grassy slope to the north of the building to the stone patio in front of the central entrance. A set of granite stairs in the stone retaining wall provides access from the path to the War Memorial to the central entrance (Figure 4).



Figure 1. Fields and panoramic views.



Figure 3. Handicap parking space.



Figure 5. Chip seal paving.



Figure 2. Wear paths



Figure 4. Site stairs.



Figure 6. Site drainage.

The site is in fair condition. Pathways around the building are paved with a chip seal. Surface drainage has eroded the chip seal, exposing the asphalt paving beneath (Figure 5). Surface drainage has also eroded site materials, especially on the south side of the lodge and along the edges of the pathways (Figure 6 & 8).

The patio to the north of the central entrance is made of dry-laid flag stones. One stone camouflages the metal well cover below (Figure 7). Several metal covers are located adjacent to the south side of the lodge; three holes in the drive access the 10,000 gallon concrete septic tank and two holes near the kitchen stair access the 1,000 gallon grease trap.

The Balsam fir tree on the south side of the west wing is holding moisture close to the building and hindering air movement necessary to dry out the building siding and exterior trim. While grasses immediately adjacent to the building should be regularly mowed, grasses at a remove from the building should be allowed naturalize and grow to their natural height.

A planting plan was created for the site (See Appendix). Most of the planting materials have not survived the extreme conditions at the summit. Future planning should utilize native plantings that occur naturally at summit.



Figure 7. Well cover under flagstone patio.



Figure 8. Erosion

Priority One

 Overgrown trees around the building needs to be pruned and/or removed.

Priority Two

- A new layer of chip seal should be added to the paved drives, parking areas and walk-ways.
- The site should be regraded to direct surface water away from the building. Downspouts should be connected to leaders or deposit runoff onto granite splashblocks.

Priority Three

Wear paths should be established as paved pathways OR re-seeded and barricaded using natural stone barriers while the turf matures.



Figure 9. Northeast elevation.



Figure 11. Southwest elevation.



Figure 13. Winter protection panels.



Figure 10. South elevation.



Figure 12. South elevation of east wing.



Figure 14. Mold growth.

MAIN BUILDING

The rustic park building is nestled into the southern slope of the summit of Mount Greylock. The two-story main building is flanked by one-and-a-half-story angled wings. The building is constructed with a fieldstone foundation and massive fieldstone walls (Figure 11) beneath wood shingle walls. The first floor of the lodge houses a commercial kitchen, main hall, dining halls, public bathrooms, and ADA lodging rooms. The second floor of the main block of the building has eight rooms: two private bedrooms, four bunk rooms, and two bathrooms. The attic contains storage and the basement contains the concessionaire's apartment, radio equipment rooms, and the mechanical room.

The building is currently unoccupied while the main access roads are reconstructed. The systems have been winterized and the windows have been protected by plywood panels (Figure 12 &1 3) that allow air to circulate through the building. The building is in generally good condition. There is evidence of deferred maintenance, worn interior finishes, and mold contamination (Fig. 14).

Pest infestations in unoccupied buildings can become a concern. There was evidence of mice in the building, including a dead mouse in the kitchen sink. Pests should be removed and their access to the interior sealed off. Existing vents, grills, and louvers in attics and crawl spaces should be secured (Figure 16) and screened with bug mesh or heavy duty wire.

Priority One

- Secure vents.
- Initiate a rodent removal/extermination program.



Figure 15. Basement post base





Figure 17. Basement



Figure 18. Basement

Foundation

The original foundation is fieldstone with wide mortar joints. The stone foundation is in good condition. The cast-in-place concrete foundations added in 1980 during the basement conversion are also in good condition. The north side of the basement has ready access to the foundation and first floor framing. The basement is in fair condition, although somewhat damp. Moisture was evident on the ground, sill plates and near the concrete piers.

There is also evidence of water damage beneath the kitchen freezers. The basement floor in the areas of the 1980 renovations is a concrete slab.

A stone loading dock is adjacent to the double doors on the east side of the south elevation beneath the kitchen. The stone and mortar in the loading dock is in good condition.

The foundation walls have no reinforcement to resist damage from seismic activity. The wall should be reinforced by concrete shear walls ties to the ledge.

Priority One

- Remove wet, moldy, and damaged materials.
- Reset slab vents (Figure 16.)

Priority Two

 Provide mechanized ventilation as recommended by a mechanical engineer.

Priority Three

Reinforce foundation walls with concrete shear walls.



Figure 19. Western chimney.



Figure 20. Main chimney.



Figure 21. Eastern chimney step flashing.

Chimneys

There are three chimneys; a chimney serving the central block and two end wall chimneys, one on each wing. The step flashing material used to flash around the chimney and along the slope of a roof appears to be lead. (Figures 20 & 21) Only the central chimney is capped and lined. The chimneys are in fair condition, however the step flashing around the chimneys is in poor condition and there is internal evidence of leaking at all three chimneys.

The chimneys are not tied to the structure and constitute a seismic hazard. The chimneys should be tied to the structure or internally braced. Lateral analysis of the structure would be required to determine the best practice to minimize the damage to the chimneys, the building, and its occupants during a seismic event.

Chimney flues should be closed off with ventilated caps made from exterior grade plywood or protected with stone-framed wire screens.

Priority One

- Remove existing deteriorated flashing and provide new lead coated copper step flashing.
- Provide stone chimney cap with a screen that will shield the flues from rain and snow and prevent the entrance of pests, without limiting ventilation.
- Remove debris from interior fireboxes.

Priority Two

- Repoint all mortar joints.
- The chimney, flues, fireboxes and cleanouts should all be inspected and cleaned by a certified chimney sweep or mason.



Figure 22. Lichen growth on stone walls.



Figure 23. Stone window sill.

Stone walls

The locally quarried stone walls are laid in a random pattern with wide mortar joints. The majority of the stone walls have tight uncracked mortar joints. Mosses and lichens have developed on the walls (Figure 22). There are some noticable cracks on the north elevation beneath the stone sills (Figure 23) and beneath the wood bracket (Figure 24).

There is missing mortar on the pier supporting the arch on the west elevation (Figure 25). There is also a radial crack in the arch as a result of unbalanced and weak bearing points. The pier and crack should be patched and repointed.



Figure 24. Mortar crack.



Figure 26. Failing sealant.



Figure 25. Missing mortar.



Figure 27. Organic growth on walls.

The junction of the stone and wood walls has been sealed in recent years with a clear bead of sealant (Figure 26). The sealant has failed in areas of extreme exposure. The joints should be cleaned and resealed. Sealant should be routinely monitored and replaced when necessary.

There are few plantings around the perimeter of the building. However a evergreen tree on the south side of the west wing is located too close to the exterior walls. The branches are holding moisture close to the wall and encouraging organic growth on the wall surface. (Figure 27).

The fieldstone walls are not tied to the structure and constitute a seismic hazard. The walls should be braced to resist lateral loads. Lateral analysis of the structure would be required to determine the best practice to minimize the damage to the building and its occupants during a seismic event.

Priority One

- Remove evergreen tree.
- Remove sealant at junction of wood shingles and stone surfaces. Clean the joint and reseal.
- Perform lateral analysis of the structure would be required to determine the best practice for seismic stabilization.

Priority Two

- Repoint all mortar joints.
- Patch cracks beneath stone sills on north elevation.
- Patch crack beneath wood bracket on the north elevation.
- Replace missing mortar on the western pier.
- Patch crack on the western pier.

Priority Three

• Routinely monitor sealant and replace when necessary.



Figure 28. Roof framing in west ell.



Figure 29. Wall & roof framing in east attic.

Framing

Roof Framing:

The roof of the western wing and a portion of the east wing over the kitchen are framed with 2"x8" rafters at 16 inches-on-center with 2"x6" collar ties and tied to 2"x8" floor joists (Figure 28 & 29). Modifications to the typical framing system were made in 1980 when the public bathrooms were modified below. All the framing in these areas appear to be in good condition and meets code requirements.



Figure 30. Dining room trusses.



Figure 32. First floor framing ledger.



Figure 31. Deteriorated end wall truss.



Figure 33. Notched framing.

The roof of the central section of the lodge is also framed with 2"x8" rafters at 16 inches-on-center. The rafters are supported by a timber truss located above the corridor wall below. The truss is supported by posts within the corridor wall. Collar ties and diagonal supports are used to counter the outward thrust of the rafters. All the framing in these areas appear to be in good condition and meets code requirements, although water stains are evident on some of the rafters and joists.

The roof framing over the dining room in the east wing is framed by exposed timber framing with mortise and tenon joinery (Figure 30). The trusses have curved web timbers and a 5"x5" vertical member. 4"x5" roof purlins are spaced evenly between the 7"x7" timber top chords of the trusses. The top chord of the trusses has significant checking along the longitudinal axis. Preventive measures should be undertaken to prevent further checking by reinforcing the members.

The truss on the east end of the dining room is interrupted by the large stone fireplace. The south side of the truss shows evidence of water infiltration and significant deterioration at the junction of the timber and stone walls on both the bottom and top chords. The water infiltration is caused by a fissure between the stone chimney and the wood shingles sheathing. The fissure needs to be repaired and the truss members replaced.

In general all the rafters need to be tied to the bearing wall plates with positive connections to resist uplift forces from high winds or seismic activity. Seismic/hurricane anchors should be installed and would require access to the interior side of the bearing wall plate.

Floor Framing:

The attic floor framing in the east and west wings are noted above. According to framing plans provided by the Department of Conservation and Recreation the second floor framing over the central section is similar to the framing over the wings. The floor joist are supported by timber framing that is exposed in the main room and porch on the first floor. 6"x8" timber joists tie into hidden steel beams in the main hall and into 10"x12" wood girders in the enclosed porch. The steel beam and the connections to the steel beam were not accessible and could not be assessed. No significant rot or deterioration were noted, but there is prevalent horizontal checking. The checked timbers should be reinforced. The visible structural elements are adequate to support the second floor loading.

The visible first floor framing is in good condition, including the sills, some of which were replaced in 1980. The first floor of the east and west wings are framed with 2"x8" joists at 16 inches-on-center. The joists frame into a continuous built-up 6"x10" girders resting on concrete piers. The joists are supported by a 2x ledger continuously nailed to the built-up girder and then toe-nailed into the girder. The framing in the area under the public restrooms was reinforced to accommodate the additional weight of the ceramic tile floor. Some of the joists in the east wing were replaced and tied to the girders by joist hangars in 1980.

The framing in the west wing is generally adequate to meet current load requirements. In the east wing the framing does not meet current code requirements. The joists on south side of the east wing and the built-up girders are inadequate to support the public assembly area above. The framing in this area needs to be strengthened to meet current standards. In addition the joists need to be connected to the built-up girders by joist hangars, particularly in the east wing. Joists that have been compromised by notches for utility lines should either be replaced or sistered with new joists (Figure 33) .

There is no ventilation of the basement and high levels of humidity were noted in the field. Droplets were visible on sill plates and near the concrete piers. There were visible wet areas from groundwater percolation around the ledge outcrops in the basement. However no noticeable insect damage or deterioration was observed.

There are visible areas of mold and decay around inactive leaks. The damp conditions in the basement level and the high humidity and lack of ventilation on the upper floors is exacerbating the mold growth. Wet moldy finish materials need to be removed and the underlying wood framing examined. Wood stud framing may be salvageable or it may need to be replaced in kind. Any remaining wood in areas of mold growth should be undergo remediation before being re-sheathed.

Priority One

- Remediate moisture levels in basement with ventilation.
- Expose sills from exterior for assessment and possible repair.
- Expose hidden roof and floor, and wall framing for further assessment.
- Mold Remediation: Remove all fungal material from the surface of the wood. Do not use power washing or media blasting techniques. Dry process spray cleaning followed by a HEPA vacuuming may be used. A fungicide may be used on the cleaned wood, however fungicides may be an irritant and pose a potential health risk; they should be used with caution. Application of fungicides should not be used as a substitute for prevention of water leaks, rising ground water, or excessive humidity in building interiors.

Priority Two

- Reinforce the top chord of the trusses members to prevent further checking.
- Repair fissure between the stone chimney and the wood shingles sheathing. Flash the joint with copper flashing. Replace truss member in kind
- Amend the built-up girders and the joists on the south side of the east wing to meet current assembly loading standards.
- Connect the floor joists in the east and west wings to the built up girder and sills with joist hangars.
- Replace or sister new joists to joists that have been compromised by notching.
- · Reinforce checked ceiling beams in main gathering hall.

Priority Three

Tie rafters to bearing wall plates with positive connections.



Figure 34. Wood roof shingles



Figure 35. Stained wood shingles.

Roofing & Drainage

The building is covered with wood roofing shingles. The roofing shingles are in poor condition on the south side of the building with evidence of curling, lifting, and loose shingles (Figure 34). The roofing shingles are in fair condition on the north side of the building with some evidence of staining (Figure 35); probably from the initial water runoff over both the existing fire retardant cedar.

New cedar shingles should be treated with pressure impregnated fire retardant to prevent moss and mildew buildup, as well as improve longevity, especially in high humidity areas. The shingles will have a level of tannic acid that can cause corrosion to unprotected metals. Cant strips should be used to raise the shingles off the copper surface as recommended by the Copper Development Association.

The roof flashing is a mix of copper, lead coated copper, and aluminum and is in poor condition. The flashing around the chimneys, as mentioned above, is in poor condition. The flashing at the junction of vertical walls and rooflines is not readily visible in all areas. The flashing that was visible appears to be in poor condition.



Figure 36. Missing downspout



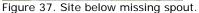




Figure 38. Drip edge, north elevation

There are gutters on the south side of the central gable roof and the south facing shed dormer. There is one downspout for each gutter. The main downspout from the porch roof is missing (Figure 36). The turf beneath the downspout is worn and eroding (Figure 37). There are no gutters on the remaining roofs. There is some evidence of splashback onto the bottom courses of the stone and wood shingle walls, as well as a pronounced drip edge adjacent to the north elevation of the east wing.

The flashings over the doors and windows, although not entirely visible are in poor condition, as evidence by interior leaking, peeling paint, and stains. The door and window flashings should be replaced.

There is flashing at junctions of the wood shingle siding and stone walls below. There are areas of loose and lifting flashing. All flashing should be replace and properly installed and secured.

Lead-coated copper is considered the premiere flashing materials in northern and maritime climates because of its resistance to acid rain and staining of adjacent materials. Copper flashing can be used with a cedar roof in most areas, with the exception of areas that are exposed to acid rain areas east of the great lakes.

Priority Two

- Replace wood roofing shingles with new treated wood roofing shingles.
- Replace aluminum flashing with new, preferably lead coated copper or zinc, flashing at all locations. DO NOT use un-coated copper flashing with cedar shingles.
- Replace flashing over the doors and windows.
- Re-grade around the exterior of the building to allow water runoff from the roof to drain away from the foundation. Install a crushed stone drip edge.



Figure 39. Wet shingles.



Figure 41. Missing gutter?



Figure 40. Deteriorated wood shingles.



Figure 42. Peeling paint.

Siding & Wood Trim

The south elevation and upper sections of the north elevation are clad in natural cedar shingles. The siding is in fair condition. During fog and early morning hours, the shingles were wet (Figure 39). The surface of the wood shingles dried naturally by late afternoon after fog and clouds had cleared. Some of the shingles have mold growth on the surface. The unexposed surfaces of the shingles maybe wet for extended periods. A narrow airspace behind the cedar shingles would facilitate the natural drying of the shingles and the sheathing beneath and extend the life of the siding.

The surface of the wood shingles is generally worn (Figure 40). Some shingles are warped, loose or missing on the south side of the porch elevation. The spacing between the shingles has widened, likely due to shrinkage as part of the natural aging process. The various gaps between the shingles have exposed the nail heads of the shingles below.

The painted wood trim is confined to door and window trim and the eaves. The trim is generally in good condition. There are several areas of wood trim with peeling paint. This is probably the result of flashing failure and lack of ventilation in the attic.

On the corner of the south elevation of the central section of the building there is a missing piece of trim right at the corner mitre joint. The trim should be replaced using a Dutchmen.

Priority One

- Missing or deteriorated exterior elements should be replaced or temporarily secured from pests.
- Remove bottom courses of shingles, examine sills, and replace shingles.
- Reattach missing or loose shingles.

Priority Two

 Provide new exterior wood shingles. Provide airspace behind shingles to facilitate drying.



Figure 43. Main door.



Figure 45. Door to basement apt.



Figure 44. Dining room exit door.



Figure 46. Porch door.

Doors

There are three doors on the north elevation of the building. The exterior of the doors is covered by a protective plywood panel. The main door is a vertical board door with a small four pane vision panel. The door has long strap hinges and modern locks and pulls. The door

and hardware were installed in the late-twentieth century and are in good condition. The main door is the designated accessible entrance, but the exterior stone threshold has a vertical rise greater than ½-inch. The threshold should be reset if possible or joined to another piece of stone that could be carved to form a short exterior ramp.

The exterior doors at the bottom of each stair provide access to the north side of the building. The solid wood doors have a vision panel, closers, metal thresholds, and panic hardware. Both doors have deterioration along the bottom of the doors.

There is one door on the east side of the building that provides access to the dining hall (Figure 44). The solid metal door has a closer and panic hardware. A towel at the bottom of the door and staining on the wood floor indicates that the door frequently leaks. The door is protected on the exterior by a plywood panel.

There is one opening that provides access to the west end of the building. The two doors in this opening are both solid metal doors with modern hardware. The exterior door is protected by the door's location under the small entry porch. There is some minor water stains on the wood floor on the interior side of the metal threshold. The door is not ADA accessible but could be easily made so with modifications to the threshold and regarding around the concrete pad.

A second door on the west side of the building provides access to the ground floor concessionaire's apartment. The door is a six-panel metal door with two glass panels. Although the door is close to grade, the door hardware, sill height, and side approach distance do not meet the requirements of the ADA. The door could be made accessible by removing the closet to widen the hall, switching the door swing, adding a short ramp to overcome the sill height, and changing the lockset to a lever-style fixture. The door should be replaced with a more historically appropriate style door.

On the south façade two utilitarian doors provide access to the kitchen and the radio room hallway. The kitchen door is a six panel metal door with a wooden screen porch. The door is reached by a flight of wooden stairs that lead down to the loading dock, dumpster, and propane storage area. The door is protected by a protective plywood panel. The doors need moderate repair.

Below the kitchen door is a pair of solid metal doors. The doors are located at the loading dock level on the exterior with an eight-inch drop to the concrete floor on the interior. The doors do not fit tightly and should be adjusted and weather stripped.



Figure 47. Bathroom door.



Figure 49. Original 5-panel door finish



Figure 48. Second floor hallway.



Figure 50. Painted 5-panel door.

Interior doors are generally in good condition. Of particular note are the intact French casement doors that lead from the main room to the porch. The historic lever handles and ball hinges should be retained.

New doors, part of renovations in the 1980s and 1990s have smooth solid surfaces and are either metal or wood depending on their location. Most of the newer doors are located on the first floor in the ADA wing and are ADA compliant (Figure 46). Other new doors are located in the basement apartment or the second floor shower rooms and are not ADA compliant. High humidity in bathrooms, shower rooms, and the basement apartment have deteriorated the painted surfaces and rusted some of the metal doors.

Older, probably original, interior doors are wood five-panel doors located on the second floor. These wood doors are in good condition, even though most of the doors have been painted white (Figure 50). One five-panel door leading to the attic over the east wing has retained its original dark wood finish (Figure 49).

Priority Two

- The exterior of the main door was not visually accessible due to the protective panel. The door is original. Clean door and hardware, adjust swing. Provide new weatherstripping.
- The exterior of the exits at each stair were not visually accessible due to the protective panels. The doors are not original and should be replaced with a historically accurate wood door. Provide weatherstripping and egress hardware.
- The exterior of the dining room door was not visually accessible due to the protective panel. The door is not original and should be replaced with a historically accurate wood door. Provide weatherstripping and egress hardware.
- The lounge doors are not original and should be replaced with a historically accurate wood door and operable winter protection. Provide weatherstripping and egress hardware.
- The exterior of the basement apartment door was not visually accessible due to the protective panel. The door is not original and should be replaced with a door in character with the historic building. Provide weatherstripping and egress hardware.
- The basement loading dock doors need moderate repair. Doors will need weather stripping and some modification to ease swing and square to frame. Prep surface and paint. Provide weatherstripping and lever hardware.
- The exterior of the kitchen door was not visually accessible due to the
 protective panel. The door is not original and should be replaced with a
 historically accurate wood door. Provide weatherstripping and egress
 hardware.
- Retain historic interior French doors. Maintain historic hardware. Scrape and paint.
- Existing interior five-panel doors should be retained and repaired as necessary. Provide new lever hardware.
- Replacement doors should be replaced with solid wood doors that meet code requirements and are in character with the historic building, preferably five panel doors. Provide lever hardware and egress hardware where necessary.



Figure 51. Protected windows



Figure 53. Storm panel sill.



Figure 52. Typical window.



Figure 54. Mildew on dormer window.

Windows

The exterior of the windows on the first floor were not visible due to the external protection panels (Figure 51). Portions of the stone sills were visible and are in good condition. The upper and lower sashes of each double hung unit have been opened to the mid-point. The position of the window sashes accommodates for some internal ventilation. The painted plywood protection panels are anchored by thru-bolts to horizontal bracing cut from dimensional lumber at the interior face of the head and sill (Figure 52 & 53). The protection panels were designed as recommended by the National Park Service to protect the windows when the lodge is not in use. This system probably works well during the cooler months when the building is not normally in use. However there does not appear to be enough interior ventilation during the warmer humid months when the lodge would normally be open. The increased levels of humidity and high summer temperatures combined with the insufficient ventilation are ideal conditions for mold growth. There was significant mold growth between the team's May and June field visit.





Figure 55. Broken ropes and replacement glass.

Figure 56. Missing muntins.

The windows are all visible from the interior. There are a few original windows on the first floor, primarily in the main gathering hall. The remaining windows appear to be replacement windows with plastic sash liners and wide muntins (Figure 54). The windows are in fair condition, needing only minor repairs and a good cleaning. There are several cracked window panes, mold growth, some missing or broken hardware (Figure 55), and missing muntins (Figure 56).

Modifications should be made to the protection panels. Small pre-formed louvers could be easily set into the existing plywood panels. Louvers should be located to give cross ventilation, interior doors should be fixed ajar at least 4" (10cm) to allow air to circulate, and hatches to the attic should be left open. A monitoring device to record internal temperature and humidity levels should be installed to determine if the internal climate is remaining stable. The units can be wired into electric service with data downloaded into laptop computers periodically.

If it is determined that there are inadequate air exchanges to keep interior moisture levels under control, additional passive ventilation can be increased, or, mechanical exhaust fans can be installed. The installation of electric fans should be upon the recommendation of an engineer. It might be considered that air intake be controlled by a timer that could vent the air with less humid air in the daytime. It should also be considered to have the basement vented separately.

Priority One

 Provide louvered or mechanized window ventilation units as recommended by a mechanical engineer.

Priority Two

 Remove and recondition all window sashes. Most windows needs minor repairs including re-glazing, hardware repair, cleaning, and painting. A portion of the windows will need repair of missing wood muntins and glass panes. All missing or broken glass on original windows should be replaced with salvaged historic glass or a historic reproduction glass. Provide weatherstripping.

Priority Three

• Exterior historic storm/screen panels should be installed to protect the historic materials, guard against vandalism, reduce air loss, and improve the energy efficiency of the building. The plywood protection panels should continue to be used in conjunction with the storm panels in the off-season.



Figure 57. Main room furnishing.



Figure 58. Porch.

Interior Fixtures & Furnishings

The building is furnished. There are bunk beds in most of the lodging rooms. There are furnishings in the concessionaire's apartment, the main hall, the dining room, and the enclosed porch. There are linens, pillows, mattresses, and small household items stored in the attic space over the west and east wings.



Figure 59. Attic linen storage.



Figure 60. Apt. furnishings.

The mattresses in attic are a fire hazard, as well as material for moisture retention. The mattresses and linens should be removed or stored carefully to prevent mold growth.

Priority One

Remove spare materials and furnishings.



Figure 61. Original wood trim finish.



Figure 62. Original paneling.

Interior Finishes

Interior wood trim & case work:

The interior of the wood finishes of the lodge are generally dark. Existing dark wood finishes are located on the stairs, in the dining room wainscoting, and the vertical board paneling in the main room and dining hall. Some wood elements on the first and second floor have been painted. On the second floor there is full length wall paneling that has been painted either light yellow or off-white (Figure 63). The original finish can be seen in the closet that leads to the east attic. The interior of the five-panel door (Figure 61) and the wall paneling are dark with red tones. The wood paneling is generally in good condition with some graffiti in the main room and damage from exterior leaks in the dining room on the east wall and beneath the windows on the south wall.

The wood trim is generally flat stock with simple detailing. On the second floor and in the basement the wood trim is painted white. The wood trim in the west wing of the main level is painted white, but the remainder of the trim is generally left natural, like the paneling and wainscoting. The wood trim, except for minor peeling, is in good condition. There is some damage to the wood baseboard in the dining room from leaks.

The concessionaire's apartment kitchen in the basement has wall and base cabinets with shelving. There is additional shelving in the pantry near the utility room. There is some open shelving in the main kitchen, in the small west wing office, and at the reception desk. Adjacent to the reception desk is an exhibition area made from wood slats. The exhibition and reception finish are light with yellow tones. The wood cabinets, shelving, and casework are in good condition.

Both stairs have naturally finished vertical balusters. The balusters are formed from a shaped wood board. The newel posts are shaped from a square post and topped with a pyramidal cap. The naturally finished treads are worn.



Figure 63. Painted trim-2nd floor.



Figure 64. Damaged paneling.

Priority Two

- Repair damaged paneling and baseboard in dining room.
- Secure loose treads, prep for finish and paint.
- Retain historic natural finishes, DO NOT PAINT. Do not remove paint at existing painted areas, except where loose and flaking. Paint over existing painted woodwork as required.
- Repair damaged paneling on east and south walls of the dining room.

Priority Three

- Restore natural wood finish to second floor paneling, trim, and doors.
- Replace kitchen and bathroom casework in basement apartment.



Figure 65. Textured ceiling.



Figure 66. Damage from leak.



Figure 67. Bathroom ceiling.



Figure 68. Drywall ceiling.

Ceilings:

The ceilings are primarily gypsum wall board, except in the main hall and dining room. The dining room has a textured plaster ceiling. The substrate for the plaster was not visible in the attic. There is some flaking paint. There is a moderate amount of deterioration of the gypsum ceilings at areas where leaking has occurred, including the western lounge (Figure 66) and the ADA bathroom. There is a moderate amount of flaking paint, evidence of excessive moisture, in the public restrooms, the ADA bathroom, in the second floor bathrooms, and in the apartment bathroom. There is minor flaking paint in the remainder of the basement apartment.

There is substantial damage to the gypsum drywall ceiling in the basement utility room and radio room hallway. According to staff, the damage is a result of a leak from a former freezer in the kitchen directly above. The drywall is moldy, peeling, and in very poor condition.

Priority One

 Remove wet and moldy drywall materials. Any drywall that has been exposed to wet or damp conditions for an extended period is possibly contaminated with mold and should be considered for removal.
 Replace drywall materials with mold-resistant drywall.

Priority Two

- Remove loose flaking paint, repair minor cracks, skim coat as required and provide a smooth surface for finish painting.
- Provide additional ventilation in bathrooms and restrooms. Use only moisture-resistant gypsum wallboard in bathrooms and restrooms.



Figure 69. Dining room southeast wall.



Figure 70. Paneling and stonewalls.



Figure 71. Moldy drywall in basement.



Figure 72. Moldy drywall in basement.

Walls

The walls are primarily gypsum wall board, except in the main hall and dining room. The dining room and main hall have a vertical board finish that is described in *Interior Wood Trim & Case Work* above. The vertical board paneling is around the chimneys is damaged from leaking (Figure 69: East Chimney) and from graffiti. There is also missing mortar at the junction of the main chimney and the wall paneling (Figure 70).

There is some cracking, mold growth, and flaking and peeling paint on the gypsum drywall. There are significant areas of deterioration in the drywall adjacent to the west chimney, basement utility room, and in the radio hallway. There is a moderate amount of flaking paint, evidence of excessive moisture, in the public restrooms, the ADA bathroom, in the second floor bathrooms, and in the apartment bathroom. There is minor flaking paint in the remainder of the basement apartment.

Priority One

 Remove wet and moldy drywall materials. Any drywall that has been exposed to wet or damp conditions for an extended period is possibly contaminated with mold and should be considered for removal.
 Replace drywall materials with wood paneling or mold-resistant drywall.

Priority Two

- Remove loose flaking paint, repair minor cracks, skim coat as required and provide a smooth surface for finish painting.
- Provide additional ventilation in bathrooms and restrooms. Use only Moisture-resistant gypsum wallboard in bathrooms and restrooms.
- Repair damaged paneling on east and south walls of the dining room.



Figure 73. Kitchen floor tile.



Figure 74. Stained wood floor.

Flooring

The flooring in the lodge is primarily narrow wood strip flooring. The wood strip flooring is extant in the dining room, all lodging rooms, and the attic closet on the east wing. The wood strip flooring is generally in good condition with some minor areas of deterioration from leaks around windows, doors, and at areas of previous removals (Figures 74 & 76).

The kitchen on the first floor and the apartment kitchen and bathroom have vinyl sheet flooring. The flooring is stained, loose, and generally worn and dated. All sheet flooring is in poor condition and should be replaced.

The flooring in the main hall of the lodge is carpeted. The carpet is a commercial type carpet with a low loop pile. The carpet is stained, torn, patched with duct tape (Figure 75) and moldy. Mold is thick and growing up the edge of the furnishings.

The public restrooms have ceramic tile flooring. The tiles are one-inch tiles are laid in a dark gray grout and are in good condition.

The flooring in the east and west attic is made of pine boards. The boards are in good condition.

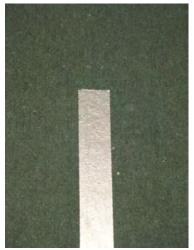


Figure 75. Duct tape repair to carpet.



Figure 76. Floor shadows.

Priority One

 Wet moldy carpets should be removed. The carpet has been exposed to wet or damp conditions for an extended period is contaminated with mold and should be removed. If existing wood strip flooring is located beneath the carpet, it should be restored and protected with walk-off mats and area rugs.

Priority Two

- Provide minor carpentry repairs to fill cracks, gaps, and to secure loose strip flooring where needed. Replace strip flooring with in-kind materials only where necessary. Stagger ends of replacement strips to blend in with existing flooring.
- Remove and replace the sheet flooring in the kitchens and apartment bathroom. Install new ceramic tile flooring.
- Clean ceramic tile floors. Patch at areas of missing or loose grout.

Painting

Most of the interior painted surfaces are in fair condition. There is some major flaking of paint in rooms with high humidity levels like bathrooms, kitchens and the utility room. There is also flaking beneath windows in the basement. Testing of the paint for color and the presence of lead was not part of this report, but based on its age of the building, some of the paint should be assumed to have a presence of lead content. Encapsulation should be preferred over stripping to avoid damage to the historic wood fabric.

Priority One

 The painted surfaces on the interior and exterior should be tested for the presence of lead paint and abated where necessary by a certified professional with experience working on National and State Register Properties.

Priority Two

 Prepare and paint all peeling and bare areas on the exterior trim of the house.

- Provide paint analysis on interior wood trim in main block to determine original and subsequent finishes.
- Clean and paint interior wood trim without excessive sanding or removal of underlying paint.

Louvers & vents

There are vent caps on the east gable end of the main block. These vents exhaust the four shower rooms installed on the second floor in 1997. Several of the connections at the shower are disconnected and one vent duct is not connected to the exterior vent. Several of the shower rooms have peeling paint and the adjacent bunkrooms have extensive mold growth. The vent ducts should be reconnected to the shower fan units and the exterior vents.

The bathroom fan unit in the concessionaire's apartment is directly vented to a vent cap on the south side of the building. The vent cap and fan unit appear to be in working condition, although the bathroom has peeling paint and mold growth.

A vent cap on the south side of the east wing exhausts the dryer in the basement utility room. The dryer has been removed. There are vents on either end of the projecting bay on the west wing that were installed in 1980 as part of the restroom remodel. The vents exhaust the public restrooms, but do not appear to be functioning. The exhaust fans should be removed and replaced.

There is a roof vent on the north side of the western roof. The vent exhausts the ADA bathroom, the vent appears to be operational. The flexible duct is in good condition and is connected. However the bathroom has experienced high levels of humidity as there is an excessive amount of peeling paint in the room and mold on the windows.

There is no visible duct or vent cap venting the men's or women's second floor bathrooms. The ventilation in these rooms needs to be verified. Evidence of excessive moisture indicates that the fan units may need to be replaced or the vent ducts and caps improved.

The kitchen in the concessionaire's apartment does not appear to ventilate to the exterior. The stove hood is self circulating.

The first floor kitchen hood is vented with two 8"x18" exhaust ducts with grease extractors to two speed high temperature exhaust fans. The ducts are equipped with an Ansol fire suppression system. The air intake is located in the sidewall of the south elevation of east wing between the exhaust fans. The 12"x25" return air duct provides fresh air to the hood thru a 8"x38" duct.

Priority One

 Bug mesh on existing vents, grills, and louvers in attics should be inspected and repaired as necessary.

Priority Two

 All ductwork and connections should be inspected and repaired as necessary.



Figure 77. Women's room sinks.



Figure 79. ADA roll-in shower.



Figure 78. Men's room toilet stall.



Figure 80. Typical 2nd floor shower stall.



Figure 81. Kitchen sink.

Plumbing System

Water service is provided by a well located on the north side of the lodge. Access to the well is under a paving stone in the patio in front of the main entry door. The building has been winterized and the plumbing systems drained. The water supply and waste piping is a mixture of cast iron, copper piping and PVC piping. The waste water and sewerage from the building is stored in a 10,000 gallon tight tank installed in 1996. The tank is alarmed and

has an auto water shut-off. Currently waster is regularly hauled off the summit and disposed of off-site.

The water heaters and water storage tanks are located in the basement. The three hydro-pneumatic tanks are in very poor condition and need to be replaced. The hot water heater for the lodge's public bathrooms is 70 gallons. This tank is probably undersized for the number of fixtures it serves: six showers, eight lavatories, and three kitchen sinks. A 50 gallon hot water tank in the utility room serves the apartment. The apartment tank is approximately ten years old and should be replaced. Tankless water heaters to provide on-demand hot water should be considered to replace existing hot water storage tanks. Tankless water heaters have a greater energy efficiency rating and a longer life span.

The plumbing system has been amended over the years during the reconstruction of the west wing bathroom in 1980, again for the addition of the basement apartment and the rehabilitation of the kitchen in 1988, and in 1997 for the addition of four shower rooms on the second floor. There are no apparent leaks in the system, although there is evidence of damage to flooring and wall finishes from condensation near the base of toilets and sinks. Some of the oldest bathroom fixtures are in need of replacement, but most of the fixtures are serviceable (Figure 77 & 78).

The ADA bathroom in the west wing of the first floor is in fair condition. The roll-in shower is in good condition (Figure 79) and in need of a cleaning. The sink and toilet do not meet current ADA standards and should be replaced.

The second floor shower rooms are in fair condition, the pipe access panels in the adjacent bunk rooms are not insulated and there is evidence of condensation. The shower units appear to be in good condition, and need minor cleaning and new curtains.

An electric water cooler was installed in the Dining Room stair hall in 1988. The water fountain is not ADA accessible and needs to be replaced.

The first floor kitchen has a double sink with an adjacent sink and undercounter dishwasher. There does not appear to be a grease trap and no mention of a trap is made on existing drawings. The sinks are in fair condition, the condition of the dishwasher is unknown.

The sink in the basement apartment is of late-twentieth century design and is not ADA accessible. The sink can be modified and reused.

The fixtures in the apartment bathroom are dated and worn, but appear to be serviceable. The apartment can sleep 10 people and the single user bathroom may not be the most efficient plan for accommodating 10 users.

The washing machine and utility sink have been removed from the utility room. The water supply and drainage is intact.

Priority One

- All new plumbing work should conform to *Massachusetts State Plumbing Code 248 CMR 2.0.*
- Replace hydro pneumatic storage tanks and associated equipment.

Priority Two

- All new plumbing work should conform to *Massachusetts State Plumbing Code 248 CMR 2.0.*
- Remove and replace the apartment hot water tank.
- New faucets with mixer valves and lever handles should be installed at all lavatories and sinks.
- Remove existing toilets and sinks in public restrooms and first floor lodging areas. Provide new low flow toilets and sinks with mixer valve faucets and lever handles. Install toilets and sinks to meet requirements of the ADA.
- New plumbing lines should be concealed in cabinets or new woodcased chases. Care and creativity should be used to minimize the removal of historic finishes and flooring.
- Provide new ADA water fountain at existing location.
- Provide grease trap in first floor kitchen.

Priority Three

• Install composting toilets in all existing flush toilet locations. Locate centralized composting tank in basement. Provide adequate ventilation in all bathrooms.



Figure 82. Dining room heater.

Mechanical System

The lodge's boiler is a cast iron steam boiler built in 1969. The burner operates on No.2 fuel oil stored in a 1000 gallon underground tank. The condition of the tank is unknown. The fuel gauge, according to staff, does not function. The combustion chamber in the burner is in bad repair and should be repaired before the heating system is operational again. The dampers are in poor condition and do not function properly. The condensate receiver and pump are in good condition. There are three zone valves. The valves are in

disrepair and the staff are unable to repair them because parts cannot be found.

The existing heating system is a one pipe steam system supplied to cast iron radiators in most of the first and second floor living spaces. The dining room has a horizontal unit heater (Figure 82). The piping is insulated and the insulation has signs that it contains asbestos.

There is electric baseboard and wall unit heaters in the basement apartment. Some of the units are rusted.

A gas connection for portable tanks is evident on the north elevation of the house. The gas is used in the first floor kitchen.

Exhaust vents from the second floor showers were designed to vent through the attic to the east gable end wall, however several of the vent ducts are disconnected from the outlets and are venting moisture directly into the attic. Overall ventilation in the building is poor. Additional ventilation issues are discussed above in *Louvers & Vents*.

There are floor grilles on the first and second floors that are remnants of an early hot air heating system.

While the mechanical system appears in fair condition, its functionality could not be tested. There are some safety issues that need to be addressed before the system should be re-fired.

Priority One

• Any pipe insulation should be tested for the presence of asbestos and abated by a certified professional.

Priority Two

- The heating system, including the boiler, and fuel supply piping should be removed and replaced. The existing radiators should be repaired and reused.
- The condition of the fuel storage tank should be investigated. Replace if necessary.

Electrical System

The electrical service is an underground feed from the north of the lodge. The main entrance is 400 amp, 3 phase, four wire service.

There is a modern electric panel with circuit breakers. There are too few outlets and not all outlets are grounded. Most of the rooms are lit by a single ceiling fixture. The visible wiring appears to be code compliant. Any new work should include inspection of existing wiring for the possibility of reuse. New energy efficient light fixtures with compact fluorescent lamps should be installed to provide ample lighting in each living space. New exterior fixtures should be controlled by a photocell and timeclock. All new fixtures should be selected to reflect the character of the lodge and its furnishings.

The lightening protection system was installed in 1980. An examination of the condition of the system was not possible from the ground. The system should be examined by lift and replaced or repaired as necessary.

The security and fire alarm systems were not tested in the field. Components of the fire alarm system were not adequately secured. The system does not meet current Life Safety standards fro quantity and location of audio visual devices.

The emergency lighting is in poor condition. Exit signs and emergency illumination fixtures are broken, not functioning, and in some cases not code compliant. The wiring in the exit sign in the dining room stair hall appears to be a fire hazard and needs to be repaired as soon as possible.

Priority One

- Retain a licensed electrician to inspect the hidden components of the electrical system. All new work should conform to Massachusetts Electrical Code 527 CMR 12.00.
- The grounded lightning protection system should be inspected by a qualified lightning protection installer.

Priority Two

- A new lighting system should be provided. Replace existing general lighting fixtures and emergency lights. Use energy efficient lamps and historically appropriate fixtures.
- Provide new power receptacles to meet current needs. Include ground fault protection in bathrooms and in the kitchen.
- Provide a new fire alarm and detection system. Include hard-wired smoke detectors, pull stations, horn/strobes, and heat detectors.
 Provide automatic fire department notification.
- New electrical chases should be located in concealed or partially concealed spaces like the closets whenever possible. Horizontal runs may be located within the walls cavity by temporarily removing the baseboard and pulling lines vertically to new wall outlets. Care and creativity should be used to minimize the removal of historic finishes and flooring.

CODE REQUIREMENTS

Building Codes

Historic Structures are irreplaceable pieces of our cultural heritage with immeasurable value. Special consideration is necessary to design fire and life safety into such structures without sacrificing historic integrity. Historic structures predate modern codes and are usually not equipped with fire detection, notification and suppression systems. The greatest threat to historic buildings and their contents is fire. However, the preservation of a structure is secondary to the safety of the occupants. Preventative measures to ensure life safety will also save the fabric of the building. Historic buildings need to be provided with safeguards sufficient to allow for a reasonable degree of safety for occupants during an emergency with a minimal intrusive impact on the historic character.

Most ordinances regulating building construction and fire safety are written primarily for new construction but have a provision that accords special considerations for historic buildings. *Massachusetts 780 CMR 34.00* provides guidance in making repairs, alterations, additions, and changes of use to existing buildings. Structures that qualify, either as a totally or partially preserved historic structure may meet alternative and, often, less stringent, guidelines. Due to the significance of structures, a limited amount of flexibility in the regulations is allowed and should be discussed with local enforcement officials. Generally, in historic buildings, if an effort is made to significantly increase the level of life safety protection with a reasonable or equivalent level of life safety, the requirement to comply with all building code requirements may be reduced. The installation of a sprinkler system, generally affords additional leeway in applying the requirements of the regulations and is good practice to protect the historic structure, especially with its remote summit location.

A complete code review was not carried out for the Bascom Lodge, but general conditions and egress requirements have been noted below:

- Doors do not meet hardware and egress requirements.
 - o The door swings and hardware need to be rehabilitated to meet current code requirements, including outward swinging doors, lever hardware, and interconnected locks.
- The stairs do not meet the width, handrail, guardrail, and riser/tread requirements for new egress stairs.
 - o If the building retains its historic use and the stairs are not altered, they need not comply with the State Building Code.
 - New fire doors and an enclosed hall should be provided at each exit stair to provide a smoke free egress route from the second floor lodging rooms.
- The insulation values of the building walls, roof, and windows do not meet State Energy Code requirements.
 - o If the building retains its historic use and the windows, roof and wall cavities are not altered, the building need not comply with the State Energy Code.
 - Exterior Storms with a low profile may be added to increase the efficiency of the windows without destroying the historic character of the building.
 - o All the exterior doors and windows and windows should be weatherstripped as part of their scope of repair.

- The electrical system is under-designed for lodging use and does not have safety features like ground fault interrupters.
 - o Any new electrical work should include code-compliant fixtures and outlets..
- There are no hard-wired smoke detectors, heat detectors, carbon monoxide detectors, or a sprinkler system.
 - o Any new electrical work should include hardwired smoke, heat, and carbon monoxide detectors, exit signs and egress lighting.
 - o If the building is to be rehabilitated a dry-pipe sprinkler system should be installed. Care should be taken to hide vertical chases in existing closets or secondary rooms. Horizontal runs may be painted out to match adjacent finishes. Any penetrations of historic moulding, paneling or casework should be undertaken by a carpenter with experience working on National and State Register properties.
- The framing is conventional farming construction with dimensional and full size lumber.
 - o The framing in the building is not adequate for lodging use.

Accessibility

The Americans with Disabilities Act (ADA) requires that "persons with disabilities are to be provided accommodations and access equal to, or similar to, that available to the general public. If the Bascom Lodgewas to retain a residential use, the ADA requirements would not apply. The Bascom Lodgeis not currently accessible. If the buildings are to be used commercially or by an institution, some physical changes would be necessary to accommodate the requirements of the ADA.

A commercial property typically needs to be accessible if it is providing goods or services to the public. Even if it is not, there should be some flexibility to accommodate for potential employees who may need accessibility features. If the building to be used for commercial purposes, it will need to meet the guidelines for alterations to historic properties.

The ADA provisions for alterations to historic properties read that alterations ought to be in full compliance with the alteration standards for other types of buildings. If by following the usual standards, the historic significance would be destroyed or threatened, alternative standards may be used. The ADA also requires review by the appropriate local or state access board. At a minimum the building should meet the following requirements:

- An accessible route should be provided from a convenient designated handicapped (HC) accessible parking spot to an accessible entrance that is a primary public entrance. The route from the designated HC accessible parking spot shall have a width of 36 inches clear and have a continuous common surface.
- A designated van accessible parking spot should be clearly designated with the proper signage and should be located within 200 feet of the main entrance. An alternative is to provide a drop off area within 100 feet of the accessible entrance.
- An accessible entrance that is clearly identifiable as a primary public entrance with access to all public areas and accessible routes on the interior of the buildings.

- An accessible route connecting all public areas, accessible toilet rooms, and the accessible entrance.
- One unisex wheelchair accessible toilet and/or bathing room located on an accessible internal route in each building that is to be occupied.

Recommendations

Making the Bascom Lodge accessible is relatively easy. Minor changes in thresholds, hardware, fixtures, and controls can be achieved with minor alteration to the character of the building. The existing accessible route could be easily amended to include an accessible entrance to the basement apartment and a second means of emergency egress from the western wings lodging rooms.

The existing first floor bathroom needs minor modification to meet current ADA standards. The public restrooms on the first floor also need only minor modification to be made meet current ADA standards.

CSI Division	Stabilization		
Scope of Work	Priority One	Priority Two	Priority Three
	Immediate Need	Year 2-3	Year 3-5
DIVISION 1 - GENERAL REQUIREMENTS			
General Conditions 15%	\$13,500.00	\$88,050.00	\$5,550.00
Overhead & Profit 12%	\$10,800.00	\$70,440.00	\$4,440.00
Remove wet moldy materials, furnishings and finishes.	\$25,900.00		
Remediate mold	\$7,400.00		
Test for presence of lead paint	\$3,000.00		
Test for presence of asbestos	\$3,500.00		
Perfrom lateral analysis for seismic stabilization	\$3,500.00		
Additional framing assessment	\$1,500.00		
Initiate a rodent removal/extermination program	\$750.00		
Missing or deteriorated exterior elements should be			
replaced or temporarily secured from pests	\$250.00		
Remediate basement humidity levels with ventilation	\$3,000.00		
		#0 000 00	
Remediate interior humidity levels with ventilation		\$9,000.00	
Provide paint analysis		\$2,750.00	
DIVISION 2 - SITE WORK			
Remove or prune overgrown vegetation	\$250.00		
Remove evergreen tree.	\$1,000.00		
Add new layer of chip seal (allow 1500 SF)	\$1,000.00	\$15,000.00	
Regrade around perimeter of lodge		\$2,600.00	
Regrade around perimeter or lodge		\$2,000.00	
Connect downspouts to leader or add splashblocks		\$1,500.00	
Establish wear paths as paved walkways		\$1,500.00	\$3,750.00
Establish wear patris as paved walkways			ψ3,730.00
DIVISION 3 - CONCRETE			
Reinforce foundation walls with concrete shear walls			\$2,100.00
DIVISION 4 - MASONRY			
Repoint chimney mortar joints		\$8,240.00	
Repoint all wall mortar joints		\$21,000.00	
Patch cracks beneath stone sills on north elevation		\$45.00	
Patch crack beneath wood bracket on the north			
elevation		\$75.00	
Replace missing mortar on the western pier		\$100.00	
Patch crack on the western pier		\$75.00	
Inspect and clean chimney flues, fireboxes, and			
cleanouts		\$4,800.00	
Clean organic growth off stones		\$3,000.00	
Routinely monitor sealant and replace when necessary			\$1,000.00
DIVICION E METALC			
DIVISION 5 - METALS			

CSI Division	Stabilization		
Scope of Work	Priority One	Priority Two	Priority Three
esspe et work	Immediate Need	Year 2-3	Year 3-5
DIVISION 6 - WOOD AND PLASTICS	Titilitediate Need	rear 2 0	10di 0 0
Expose hidden framing for assessment and repair	\$500.00		
Expose sills from exterior for assessment and repair,			
replace shingles as needed.	\$7,200.00		
Reinforce the top chord of the trusses members to			
prevent further checking		\$5,600.00	
Repair fissure between the stone chimney and the			
wood shingles sheathing. Flash the joint with copper			
3 3 11		¢7.250.00	
flashing. Replace truss member in kind Amend the built-up girders and the joists on the south		\$7,250.00	
side of the east wing to meet current assembly			
		¢E 2E0 00	
loading standards		\$5,350.00	
Connect the floor joists in the east and west wings to			
the built up girder and sills with joist hangars		\$1,250.00	
Replace or sister new joists to joists that have been		\$1,230.00	
compromised by notching		\$5,650.00	
Reinforce checked ceiling beams in main gathering		\$5,050.00	
hall		\$3,500.00	
Repair damaged paneling and baseboard in dining		\$3,500.00	
room		\$2,750.00	
Secure loose treads, prep for finish and paint		\$1,200.00	
Minor carpentry repairs to repair wood floors.		\$2,000.00	
Tie rafters to bearing wall plates with positive		\$2,000.00	
connections			\$9,000.00
Restore natural wood finish to second floor paneling,			\$7,000.00
trim, and doors			\$2,700.00
Replace kitchen and bathroom casework in basement			\$2,700.00
apartment			\$5,375.00
apartment			\$5,575.00
DIVISION 7 - THERMAL /ROOFING			
Remove existing flashing; new lead coated copper			
step flashing @ chimneys	\$5,250.00		
Stone chimney caps	\$1,500.00		
Remove debris from fireboxes	\$240.00		
Remove existing sealant. Clean joint and reseal.	\$2,400.00		
Reattach missing or loose shingles	\$375.00		
Replace wood roofing shingles with new treated wood			
roofing shingles		\$31,075.00	
Replace door and window flashing		\$7,140.00	
Dealess showing flashing 19			
Replace aluminum flashing with new, preferably lead			
coated copper or zinc, flashing at all locations.		\$12,600.00	
Replace wood shingle siding. Provide airspace.		\$25,750.00	
replace wood shirigle sluttig. Provide all space.		φ∠3,73U.UU	

DIVISION 8 - DOORS AND WINDOWS	
The exterior of the main door was not visually accessible due to the protective panel. The door is original. Clean door and hardware, adjust swing. Provide new weatherstripping	\$315.00
The exterior of the exits at each stair were not visually accessible due to the protective panels. The doors are not original and should be replaced with a historically accurate wood door. Provide weatherstripping and egress hardware	\$3,700.00
The exterior of the dining room door was not visually accessible due to the protective panel. The door is not original and should be replaced with a historically accurate wood door. Provide weatherstripping and egress hardware	\$1,850.00
The lounge doors are not original and should be replaced with a historically accurate wood door and operable winter protection. Provide weatherstripping and egress hardware	\$2,250.00
The exterior of the basement apartment door was not visually accessible due to the protective panel. The door is not original and should be replaced with a door in character with the historic building. Provide weatherstripping and egress hardware	\$1,250.00
The basement loading dock doors need moderate repair. Doors will need weather stripping and some modification to ease swing and square to frame. Prep surface and paint. Provide weatherstripping and lever hardware	\$880.00
The exterior of the kitchen door was not visually accessible due to the protective panel. The door is not original and should be replaced with a historically accurate wood door. Provide weatherstripping and egress hardware	\$2,100.00
Retain historic interior French doors. Maintain historic hardware. Scrape and paint Existing interior five-panel doors should be retained	\$200.00
and repaired as necessary. Provide new lever hardware	\$6,500.00
Replacement doors should be replaced with solid wood doors that meet code requirements and are in character with the historic building, preferably five panel doors. Provide lever hardware and egress hardware where necessary	\$21,000.00
Remove and recondition all window sashes. Most windows needs minor repairs including re-glazing, hardware repair, cleaning, and painting. A portion of the windows will need repair of missing wood muntins and glass panes. All missing or broken glass on original windows should be replaced with salvaged historic glass or a historic reproduction glass. Provide weatherstripping	\$18,000.00
Exterior historic storm/screen panels should be installed to protect the historic materials, guard against vandalism, reduce air loss, and improve the energy efficiency of the building. The plywood protection panels should continue to be used in conjunction with the storm panels in the off-season	\$14,400.00

CSI Division	Stabilization		
Scope of Work	Priority One	Priority Two	Priority Three
	Immediate Need	Year 2-3	Year 3-5
DIVISION 9 - FINISHES	¢1 000 00		
Remove wet moldy carpet. If existing wood strip flooring is located beneath the	\$1,000.00		
carpet, it should be restored and protected with walk-			
off mats and area rugs		\$11,655.00	
Remove loose flaking paint, repair minor cracks, skim			
coat as required and provide a smooth surface for			
finish painting ceilings Remove loose flaking paint, repair minor cracks, skim		\$11,100.00	
coat as required and provide a smooth surface for			
finish painting walls		\$17,760.00	
New drywall should be MR in wet areas		\$995.00	
Provide minor carpentry repairs to fill cracks, gaps,			
and to secure loose strip flooring where needed. Replace strip flooring with in-kind materials only			
where necessary. Stagger ends of replacement strips			
to blend in with existing flooring		\$790.00	
Remove and replace the sheet flooring in the kitchens		,	
and apartment bathroom. Install new ceramic tile			
flooring		\$4,600.00	
Clean ceramic tile floors. Patch at areas of missing or		\$14.00	
loose grout		\$14.00	
Prep and paint existing painted interior wood work		\$6,250.00	
Prep and paint exterior trim		\$18,750.00	
DIVISION 10 – SPECIALTIES			
Secure vents	\$250.00		
DIVISION 11 - EQUIPMENT			
DIVISION 12 - FURNISHINGS			
Remove spare materials and furnishings	\$1,200.00		
DIVISION 13 - SPECIAL CONSTRUCTION			
DIVISION 13 - SI EGIAE GONSTRUCTION			
DIVISION 14 - CONVEYING SYSTEMS			
DIVISION 15 - MECHANICAL Replace water storage tanks	\$19,750.00		
Replace hot water tank	\$19,750.00	\$1,500.00	
New mixer valves and lever handles on all sinks and		ψ1,000.00	
lavatories.		\$4,000.00	
Remove sinks. Provide ADA sinks.		\$11,000.00	
Remove toilets. Provide ADA toilets.		\$9,000.00	
New ADA water fountain		\$1,000.00 \$1,250.00	
Grease trap in kitchen Replace flush toilets with composting toilets		φ1,23U.UU	\$13,000.00
Remove and replace heating system		\$125,000.00	Ţ.0,000.00
Assess fuel storage tank		\$1,500.00	
DIVISION 16 - ELECTRICAL	#/00 0C		
Assess lightening protection Provide new electrical distribution	\$600.00	\$15,000.00	
Provide new electrical distribution Provide new electrical receptacles		\$30,000.00	
Replace fire alarm and detection system	+	\$20,000.00	
Provide all new electrical fixtures		\$30,000.00	
Emergency signage and lighting		\$15,000.00	
Building Restoration	\$114 415 00	\$746 200 00	¢44 01E 00
Contingency 15%	\$114,615.00 \$17,192.25	\$746,399.00 \$111,959.85	\$46,915.00 \$7,037.25
A&E Fees 12%	\$17,192.25	\$103,003.06	\$6,474.27
Total Construction Cost	\$147,624.12	\$961,361.91	\$60,426.52

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